



Private Placements: Is it really a Norwegian Phenomenon?

An empirical study of private placements on Euronext Oslo and
Nasdaq Stockholm's main list during the period 2017 to 2022

Trygve Bruvik Ellingstad & Lars Christian Kjemhus

Supervisor: Karin Thorburn

Master of Science in Economics and Business Administration

Major in Financial Economics

NORWEGIAN SCHOOL OF ECONOMICS

This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible - through the approval of this thesis - for the theories and methods used, or results and conclusions drawn in this work.

PAGE INTENTIONALLY LEFT BLANK

Preface

This thesis completes the Master of Science at the Norwegian School of Economics, where we majored in Financial Economics. Our shared interest in the capital markets has been instrumental in shaping the focus of this research. The impetus for this study arose from the media coverage surrounding private placements in Norway during the autumn of 2022. Additionally, we drew inspiration from one of Deloitte's proposals for master theses.

The media extensively covered the topic of private placements, often portraying it as discriminatory towards existing shareholders. Furthermore, it appeared that the widespread use of private placements was predominantly observed within the Norwegian market. This sparked our interest in investigating whether it is a unique characteristic of the Norwegian market. To address this, we investigate follow-on offerings in the Norwegian and Swedish markets and compare the two markets holistically, including both legal, regulatory, and financial perspectives. Expanding the scope of our thesis, we examine the differential market reactions to private placement announcements on the main list in these two markets, while also identifying the factors explaining these reactions.

We would like to express our utmost gratitude to our supervisor, Professor Karin Thorburn, whose invaluable insights and guidance greatly contributed to the writing process. Moreover, we wish to extend our appreciation to Per Fossan-Waage from Deloitte and Johan Wigh from TM & Partners for providing us with valuable insights into the Norwegian and Swedish equity markets.

Norwegian School of Economics
Bergen, June 1st, 2023

Trygve Bruvik Ellingstad

Lars Christian Eikhaug Kjemhus

Abstract

This thesis is split into two main sections. The first part investigates seasoned equity offerings (SEOs) on Euronext Oslo and Nasdaq Stockholm's main list during the period 2017 to 2022, as well as characteristics of and differences between the two equity markets. The second part examines the short-term market reaction to private placements in Norway and Sweden in the same period. Our findings show that private placements are the dominant follow-on offering in both Norway and Sweden, accounting for 86% and 58% of all equity capital raised on the two respective exchanges. With a sample of 336 private placements, our results unveil a statistically significant negative share price reaction to private placement announcements in Norway and an insignificant and less negative share price reaction in Sweden. This is contrary to previous studies and prevailing private placement hypotheses such as the monitoring and certification hypothesis. These two hypotheses argue that private placements directed to active and informed investors decrease agency costs and provide a value certification, respectively, hence the market should react positively. Our results can be better explained by economic intuition and the mechanical share price depreciation that follows private placements issued at a discount.

This thesis contributes to existing literature in three ways. First, it investigates a more recent period. Second, it examines whether the announcement returns in both markets align with the implied share price depreciation. Third, we investigate whether the informational effects from private placements differ in the two markets. We find that for every 1% increase in the implied share price depreciation, the Norwegian and Swedish issuers experience a reduction in announcement returns of 0.62%, on average. The Norwegian and Swedish market react less than expected, meaning that the private placements signal positive information, countering the mechanical share price reduction that stems from the dilution and discount. This finding implies that firms experience lower indirect flotation costs than expected. Lastly, we find that the informational effect from private placements is more positive in Sweden compared to Norway, showing that nonparticipating shareholders in Sweden experience a less adverse effect on their shareholder returns compared to Norway. One plausible explanation for this finding is that a larger share of active and strategic investors participating in the Swedish private placements reduce agency costs, provide value certification, and might add value to the firms.

Table of Contents

1. Introduction	1
2. Seasoned Equity Offerings	3
2.1 Public and Rights Offer	3
2.2 Private Placement	4
2.3 Dilution.....	4
2.4 Flotation Costs.....	5
3. Euronext Oslo & Nasdaq Stockholm.....	6
3.1 Rules and Regulations on Euronext Oslo and Nasdaq Stockholm.....	6
3.1.1 Regulatory Requirements for Rights Issues and Private Placements.....	6
3.1.2 The Equal Treatment Principle	7
3.1.3 Shareholder Approval in Norway and Sweden	8
3.2 Market Composition.....	9
4. Seasoned Equity Offerings on Euronext Oslo and Nasdaq Stockholm.....	11
4.1 Overview of Seasoned Equity Offerings on OSE and OMX	11
4.2 Stated Use of Proceeds	14
4.3 The Use of Repair Offerings	15
4.4 Other Remarks.....	17
5. Theory and Literature Review.....	18
5.1 Capital Structure.....	18
5.2 Agency Issues.....	19
5.3 Literature Review of Private Placements	19
5.3.1 Monitoring Hypothesis.....	20
5.3.2 Certification Hypothesis.....	20
5.3.3 Managerial Entrenchment Hypothesis	20
5.3.4 Redistribution of Wealth	21
5.3.5 Shareholder Approval and Private Placement Announcement Return	21
6. Hypotheses	22
7. Methodology	24
7.1 Event Study	24
7.1.1 Event Window	24
7.1.2 Estimation Window	25
7.1.4 Measuring Abnormal Return.....	25
7.2 Cross-Sectional Study	27
7.2.1 Significance Testing.....	27
8. Data.....	28

8.1 Data Sample	28
8.2 Description of the Sample	29
8.3 Variables Used in the Cross-Sectional Analysis	32
8.3.1 Subscription Price Discount (%)	32
8.3.2 Relative Shares Issued (%).....	32
8.3.3 Implied Share Price Depreciation (ISPD) (%)	32
8.3.4 Market Capitalization	33
8.3.5 Dummy Repair	33
8.3.6 Dummy Use of Proceeds.....	33
8.3.7 Proceeds Raised (MNOK) (MSEK)	34
8.3.8 Dummy Industry	34
8.3.9 Dummy Oslo Stock Exchange	35
8.3.10 Interaction Dummy (ISPD x Dummy Oslo Stock Exchange).....	35
9. Results	36
9.1 Short-Run Cumulative Abnormal Returns	36
9.2 Cross-Sectional Regression Full Sample	40
9.2.1 Implied Share Price Depreciation and Announcement Returns.....	41
9.2.2 Informational Effects from Private Placements in Norway and Sweden.....	42
9.2.3 Other Explanatory Variables	42
9.3 Cross-Sectional Regression – Use of Proceeds.....	43
9.4 Cross-Sectional Regression – Industries	45
10. Assessment of Robustness.....	46
10.1 Limitations of Event Study	46
10.2 Limitations of Cross-Sectional Analysis.....	47
10.2.1 Treatment of Outliers	47
10.2.2 Heteroskedasticity	47
10.2.3 Multicollinearity.....	48
10.2.4 Data and Sample Size.....	49
11. Conclusion and Further Research	50
References	52
Appendix A	55
Appendix B.....	56
Appendix C	57
Appendix D	58
Appendix E.....	59
Appendix F.....	60

List of Figures

Figure 2.1 - Types of SEOs.....	3
Figure 4.1 - Yearly Volume OSE.....	12
Figure 4.2 - Yearly Volume Nasdaq Stockholm.....	13
Figure 4.3 - Use of Proceeds for Private Placements on OSE and OMX.....	15
Figure 7.1 - Event Study Timeline.....	25
Figure 8.1 – Number of Private Placement Distributed on Sector.....	29
Figure 9.1 - Cumulative Average Abnormal Returns for both Stock Exchanges [-1,1].....	36
Figure 9.2 – The Statistical Significance of Daily Abnormal Returns.....	37

List of Tables

Table 1 - Requirements for Rights Issues and Private Placements.....	7
Table 2 - Descriptive Statistics of SEOs on OSE and OMX.....	14
Table 3 - Theoretical Evidence on the Expected Market Reaction to a Private Placement.....	21
Table 4 - Descriptive Statistics of the Private Placement Sample.....	31
Table 5 - Yearly Distribution of the Private Placement Sample.....	31
Table 6- Cross-Sectional Regression – Cumulative Abnormal Return.....	40
Table 7 - Cross-Sectional Regression: Use of Proceeds.....	44
Table 8 - Cross-sectional Regression: Industry.....	45
Table 9- Correlation Matrix.....	48
Table 10 – VIF Test.....	48

1. Introduction

Raising capital is crucial in the life cycles of many firms. Additionally, it has implications for the firm, the shareholders, and other stakeholders, making it an important event to examine. Private placements have become the preferred method to raise additional equity on Euronext Oslo. It is considered a cost-efficient, simple, and timely way of raising additional equity. Unlike other types of follow-on offerings, private placements are directed to specific individuals and waive shareholders' preferential rights. This can potentially result in a dilutional effect for existing, non-participating shareholders as the shares are usually issued at a discount.

How firms should raise capital has been extensively discussed within the field of corporate finance for many decades. Modigliani & Miller (1958) state that in a perfect capital market, firm value is not affected by the firm's capital structure. Based upon problems with asymmetrical information between managers and investors, Ross (1977) claims that managers signal a firm's true value through its financing decisions. According to this theory, an equity issue implies that the firm is overvalued. Myers & Majluf (1984) argue that due to the informational asymmetries, managers should finance investment opportunities with the lowest cost of capital, favoring retained earnings, thereafter debt, and only issue equity as a last resort.

The purpose of this thesis is to investigate the use of private placements on Euronext Oslo (OSE) and Nasdaq Stockholm (OMX) and analyze the results based on applicable contemporary literature, regulatory-, juridical- and market characteristics. We start with an introduction to the different types of SEOs in section 2. Next, in sections three and four, we highlight the regulatory characteristics and provide a thorough overview of SEOs in Norway and Sweden for the years 2017-2022. We find that shareholder protection is stronger in Sweden compared to Norway and that the regulatory requirements in Norway and Sweden contribute to making private placements advantageous compared to rights and public issues. In contrast to rights- and public issues, there are no prospectus requirements for private placements offered to less than 150 participants and for offerings that are below 20% of shares outstanding. While rights issues have a minimum duration of two months, private placements below these thresholds can be executed overnight or relatively quickly. Furthermore, we document that the widespread use of private placements is not a unique characteristic of the Norwegian market. Private placements have been the dominant SEO type in Sweden as well, accounting for 58% of all additional equity raised in the last six years.

Section five elucidates central concepts within corporate finance and presents prevailing hypotheses and empirical findings on private placements. In section six, we present our hypotheses and the motivation behind them, while section seven presents the methodologies used to test these hypotheses. Section eight describes our final data sample, consisting of 336 private placements between 2017 and 2022, split into 188 transactions on OSE and 148 transactions on OMX.

In section nine, we present the results from the event study and the cross-sectional study. This section is split into two parts. The first part examines the market reaction to private placement announcements on OSE and OMX. We find a statistically significant negative share price reaction to private placement announcements on OSE and an insignificant and less negative share price reaction on OMX. This is contrary to contemporary research reporting positive announcement returns. In the second part, we test our two hypotheses by utilizing cross-sectional regressions. The first hypothesis investigates whether the announcement returns on OSE and OMX align with the implied share price depreciation. We find that for every 1% increase in the implied share price depreciation, issuing firms on OSE and OMX experience a reduction in announcement returns of 0.62%, on average. The Norwegian and Swedish market react less than expected, meaning that the private placements signal positive information, countering the mechanical share price reduction that stems from the dilution and discount. This finding implies that firms experience lower indirect flotation costs than expected.

Our second hypothesis examines whether the informational effects from private placements differ in the two markets. We find that the informational effect from private placements is more positive in Sweden compared to Norway, meaning that nonparticipating shareholders in Sweden experience a less adverse effect on their stock returns compared to shareholders in Norway. One plausible explanation for this finding is that a larger share of active and strategic investors participates in Swedish private placements, compared to Norway where a large number of passive investors participate. Active and strategic investors participating in the Swedish private placements might reduce agency costs, provide value certification, and add value to the firms.

2. Seasoned Equity Offerings

Publicly listed companies can raise additional equity capital through different types of seasoned equity offerings (SEOs). In an SEO, the firm issues new shares and offers them to new and/or existing shareholders. A SEO is also called a follow-on offering or a secondary equity offering. There could be several reasons for a firm to raise additional equity capital, such as funding capital expenditures and investments, growing and strengthening business segments through M&A, getting strategic flexibility, improving liquidity, or strengthening the financial situation. In more critical situations, SEOs are conducted to avoid bankruptcy. The three different approaches for listed companies to issue additional equity capital are through *public offers*, *rights offers* and *private placements*. In the following subsection, we provide a brief description of each and explain the differences between them.

Figure 2.1 - Types of SEOs



2.1 Public and Rights Offer

In a public offering, shares are sold in the open market and are therefore accessible to all investors, both existing and new shareholders. In contrast to public offerings, rights offerings are exclusively directed toward existing shareholders. Here, existing shareholders are given a subscription warrant pro rata to their shareholding. The subscription warrant gives existing shareholders the right to buy additional shares during a predetermined period. The subscription rights have similarities to a call option, as it gives the owner the right but not the obligation to

buy additional shares. Shareholders who do not want to buy additional shares can sell their subscription warrant if it is tradeable. If the subscription price is below the share price, the subscription warrant will be “in the money” and hence be valuable. On the contrary, if the share price is below the subscription price at the end of the subscription period, the warrant will be “out of money” and lose all its value.

2.2 Private Placement

In a private placement, shares are sold to a smaller and exclusive group of investors. The investors targeted could be larger existing shareholders, new shareholders, or a combination of both. Compared to public and rights issues, it requires less documentation and due diligence for the issuers. The time aspect is also advantageous, as private placements typically are carried out relatively quickly. All these aspects make private placements a cost-effective way of raising capital quickly. Often, it leads to discrimination against current nonparticipating shareholders. Private placements offered with a discount have a dilutive effect on existing shareholders who are not invited to participate in the offer. We will elaborate more on this in the next section.

2.3 Dilution

When firms issue equity, the total number of shares and the firm’s cash balance increase. In a private placement, the nonparticipating existing shareholders face *dilution* since their relative ownership decreases. The subscription price of the new shares in the private placement can be issued at a discount, equal to the prevailing market price, or at a premium. New shares issued at a premium will be beneficial for the firm and the existing shareholders. A subscription price equal to the prevailing market price will neither create nor depreciate value for existing shareholders. New shares in an equity offering are typically offered at a discount to ensure that the firm gets the funding it needs. This will effectively reduce the value per share for existing shareholders. The expected mechanical reduction in share price due to the discount and relative shares issued is defined as the *implied share price depreciation* in this thesis.

The discount depends on the type of SEO. In a rights issue, it must be ensured that the share price does not fall below the subscription price during the subscription period, or the firm will not receive any new capital. In a public offer or a private placement, the motive for the discount is to make the offering attractive for investors and thus secure funding. Dilution also differs between the various types of SEOs. In a rights issue, existing shareholders are allocated

subscription rights on a pro-rata basis. Hence, none of the existing shareholders will face dilution or experience dilution of their investment. Subscription rights that are tradeable make it possible for existing shareholders who do not want to participate in the equity offering to avoid dilution by selling their subscription rights. In a private placement, a significant portion of existing shareholders will experience dilution of their investment. If the participants in the private placement are exclusively outside investors, all existing investors will experience a dilution on their investment. To prevent this effect, some firms do a “repair issue” following a private placement. A repair issue can be described as a subsequent rights issue offered to all nonparticipating shareholders. Normally the subscription price in the rights issue equals the offer price in the private placement, allowing all existing shareholders to participate on the same terms. However, the repair offering will be cancelled if the share price falls below the subscription price during the subscription period. We will elaborate more on this in section 4.3.

2.4 Flotation Costs

Flotation costs are the total costs related to SEOs and can be divided into direct and indirect flotation costs. The direct flotations costs consist of underwriter fees, fees for lawyers and accountants, and registration fees for the stock exchange. The indirect flotation costs consist of issue discount, potential negative stock price movement from the announcement, cost of offering delays or cancellation, guarantees of the issue, as well as management’s time and effort in the process (Eckbo, 2007). Gao and Ritter (2010) studied U.S. firms and found that fees related to private placements are lower than fees related to public offerings. This can be explained by the time and regulations required for public offerings, increasing the fees to underwriters. Public offerings are also often underwritten, which is very expensive. Since the requirements are similar for rights and public offerings, we assume fees for private placements are lower than rights offerings as well.

3. Euronext Oslo & Nasdaq Stockholm

This section highlights the regulatory framework for equity issues in both Norway and Sweden. Furthermore, we give a brief overview of the market composition of Euronext Oslo and Nasdaq Stockholm. These characteristics are important when analyzing the use of private placements in Norway and Sweden.

3.1 Rules and Regulations on Euronext Oslo and Nasdaq Stockholm

3.1.1 Regulatory Requirements for Rights Issues and Private Placements

The regulatory requirements for different types of SEOs in Norway vary significantly. Rights and public issues require both a listing and an offering prospectus. The prospectus document, which is drafted by the legal and financial advisers, typically contains all relevant information about the firm and the issue. Private placements, on the other hand, have no prospectus requirements for offerings with less than 150 participants or for offerings that are below 20% of shares outstanding. Offerings below these thresholds can be executed within hours, allowing companies to quickly raise capital without the burden of regulatory requirements (Waage-Fossan, 2020). A rights issue is a more complex process, with a minimum duration of two months as the prospectus must be approved by The Financial Authorities, and the subscription rights have a subscription period of 14 days. This lengthy timeline poses a significant market risk, as share prices could decrease during the subscription period. Moreover, the time aspect and failure risk make it crucial for someone to guarantee the issuance in advance. Typically, this could be a large majority shareholder willing to bear the risk for the shareholders or a consortium of guarantors. A large firm with a highly liquid stock can more easily receive guarantees. Smaller firms with less liquid stocks may need to bring in an external guarantor. An external guarantor will typically demand a high guarantee commission, further increasing the direct flotation costs for the issuing firm.

The same regulatory requirements for rights issues and private placements in Norway apply to listed firms in Sweden. Firms listed in Sweden can therefore conduct a private placement overnight or relatively quickly if less than 150 investors participate and the offering of shares is less than 20% of the shares outstanding. As in Norway, rights issues in Sweden have a longer duration since the prospectus must be approved by the Swedish Financial Supervisory Authority and the subscription period lasts for 14 days. The regulatory implications are

therefore the same in the two equity markets. An overview of the regulatory requirements for Norway and Sweden is shown in Table 1 below.

Table 1 - Requirements for Rights Issues and Private Placements

Requirements	Norway		Sweden	
	Rights issue	Private placement	Rights issue	Private placement
Offering prospectus	Yes	No, if < 150 participators	Yes	No, if < 150 participators
Listing prospectus	Yes	No, if < 20% of shares outstanding is issued	Yes	No, if < 20% of shares outstanding is issued
Investor presentation	Yes	Yes	Yes	Yes
Subscription period	14 days	No, carried out within hours	14 days	No, carried out within hours
Subscription rights	Yes	No	Yes	No
Shareholder preferential rights	Yes	No	Yes	No
Guaranteed issue	Yes, usually	No, not necessary	Yes, usually	No, not necessary

3.1.2 The Equal Treatment Principle

Section 5-14 in the Norwegian Securities Trading Act (STA), which applies to all listed firms on the OSE, states that all shareholders of publicly listed companies must be treated equally (*equal treatment principle*). According to this principle, rights issues should be the norm when public firms issue additional equity. A private placement is a deviation from this principle, as the exclusive group of investors participating is given an advantage at the expense of the other existing shareholders. However, differential treatment can be justified in situations where the act is in the common interest of the firm and its shareholders. Euronext Oslo, which is the regulatory body approving equity issuances in Norway, provides guidelines concerning the equal treatment principle in Circular No. 2/2014. It states that the benefits of the issue must be weighed against the disadvantages such as dilution and change in ownership structure. Further, the assessment should include the long-term effects and the purpose of the additional capital. Lastly, it requires the issuing firm to assess other possible alternatives. Euronext Oslo specifically states that this evaluation is important for the approval of the issue. If another alternative provides fewer negative effects on existing shareholders and the same benefits as in the private placement, this alternative should be chosen (Oslo Børs, 2004).

Øivind Amundsen, the Director of Euronext Oslo, was asked about the stock exchange's role and the extensive use of private placements in December 2022. He explained that the stock exchange does not intervene in less severe cases of discrimination and that it is not their duty to be an equal treatment police (Winther, 2022). Amundsen further stated that they will

intervene in cases with unreasonable and severe discrimination. His statements may partially explain why the stock exchange has only intervened on a few occasions. An equity offering must also be approved by the Financial Supervisory Authority (FAS). In a letter dated December 19th, 2022, FAS reminded all Norwegian investment banks about the regulations and their duties as advisers and issuers. Further, FAS stated that it will monitor the investment banks' compliance with the STA and how Euronext Oslo fulfills its obligations.

Chapter 11 of the Swedish Companies Act regulates equity issues in Sweden. The Act requires equal treatment of shareholders, and companies cannot provide preferential treatment to certain shareholders at the expense of others (Aktiebolagslag, 2005). Similar to Norway, it means that private placements cannot be carried out without a valid reason, such as the need for rapid access to capital or if it is in the common interest of the firm and its shareholders. The Swedish Securities Council provides guidelines on the equal treatment principle and states that deviations from the principle are allowed if there is a valid reason and if the board has assessed the issue in a careful and objective manner. The guidelines provide a list of factors that need to be considered, such as the purpose of the issue, the price, the timing, and the effects on existing shareholders (Aktiemarknadens Självregleringskommitté, 2014).

To summarize, the legal jurisdiction in both Norway and Sweden requires equal treatment of shareholders. In situations where companies have factual justifications or a valid reason for differential treatment, a private placement can be chosen. This could be a financially distressed firm dependent on raising capital quickly, whereas the alternative is bankruptcy.

3.1.3 Shareholder Approval in Norway and Sweden

Chapter 5 in The Norwegian Public Limited Liability Companies Act regulates equity issues in Norway (Aksjeloven, 1977). The act states that firms need a two-thirds majority vote from the general assembly to approve an equity issue. However, the general assembly can give the board authorization for a two-year period to act on behalf of the shareholders. This provides management with the opportunity to waive shareholders' preferential rights and execute a private placement rapidly without a new general meeting. A board authorization requires a two-thirds vote at the general assembly, and it must be specified what the authorization includes. Most private placements on the OSE are carried out through board authorizations. Norwegian corporate law has the same voting requirements for public issues, rights issues, and private

placements. We find this very interesting and surprising, given the potentially negative effects for nonparticipating shareholders in private placements.

In comparison, Swedish listed firms only need a majority (above 50%) vote from the general assembly to conduct a rights issue. In contrast, a private placement directed towards outside investors require a two-thirds majority (66%) vote (Aktiebolagslag, 2005). However, private placements towards insiders require a 90% majority vote, making it harder to target management in private placements. Also, in Sweden firms can obtain board authorization to waive shareholders' preferential rights and carry out a private placement without a general meeting vote. However, private placements directed to insiders must be approved by the general assembly and cannot be conducted with board authorization. The different voting requirements for private placements and rights issues in Sweden show that shareholder protection is stronger compared to Norway.

3.2 Market Composition

Market characteristics in Norway and Sweden might influence the use of private placements and the market reaction. Therefore, we highlight the disparities between the two markets. The Norwegian equity market differs in both industry composition, size, and governmental ownership compared to the Swedish equity market. Nasdaq Stockholm is approximately twice as large and more diversified than Euronext Oslo. On OSE, Equinor constitutes 26% of OSE's total market capitalization. Further, the 7 largest firms (Equinor, DNB, Aker BP, Telenor, Norsk Hydro, Yara and Adevinta) constitute 51% of OSE. In comparison, the largest firm on OMX constitutes only 4% of the exchange's total market cap. The Norwegian government owns a large portion of the largest companies on Euronext Oslo, making them a large shareholder on OSE. On OMX, the Swedish government owns only 3% of Nasdaq Stockholm (Statistiska Centralbyrån, 2023).

Market data collected in December 2022 shows that the energy industry is dominant on the OSE, with 40% of the total market capitalization. Following is the financial industry with 15% and the industrial sector with 14% of the total market capitalization (Appendix D). OSE is known for being energy-oriented, with oil and oil-service firms dominating the exchange. Seafood and shipping are also a large portion of the exchange. This results in a stock exchange that is sensitive to oil price changes and the global economy. On Nasdaq Stockholm, other

industries such as financials, consumer discretionary and health care are strongly represented. Industrials is the dominant industry, with 33% of the total market capitalization. Following is the financial industry with 24% and consumer discretionary with 11% of the total market capitalization (Appendix E). The more diversified market in Sweden results in a more stable equity market, less reliant on oil prices or other specific global market dynamics. This can potentially influence the practice and occurrence of seasoned equity offerings. One might argue that the stable equity market in Sweden results in fewer companies with short-term capital needs, a common reason for private placements. Short-term capital needs also depend on capital structure and leverage, as higher levels of debt result in a greater need for capital on short notice. We argue that the cyclical and capital-intense nature of the Norwegian industries can result in a higher frequency of private placement in the Norwegian equity market. Furthermore, firms within the energy sector often have a high leverage ratio, which might contribute to a greater short-term capital need on OSE compared to OMX.

4. Seasoned Equity Offerings on Euronext Oslo and Nasdaq Stockholm

Private placements are the dominant approach for issuing additional equity on OSE and OMX, as illustrated in Figure 4.1 and 4.2. A misconception is that the widespread use of private placements is unique to the Norwegian equity market. This section documents the widespread use of private placements in both Norway and Sweden. Moreover, we present various descriptive statistics for the two equity markets to illustrate the use of SEOs. The raw data is collected from Refinitiv's Deal Screener, as well as manually inspecting firm news on Euronext Oslo and Nasdaq Stockholm's website.

4.1 Overview of Seasoned Equity Offerings on OSE and OMX

As Figure 4.1 illustrates, private placements are the preferred SEO type in Norway, both in terms of value and number of transactions. In the years 2017-2022, 45 private placements were executed on average per year. In comparison, there were on average 8 rights offerings per year. In terms of value, private placements accounted for around 86% of the total SEOs these years. In addition, we see an increase in the use of private placement. In 2021 and 2022 private placements accounted for more than 95% of all equity capital raised, compared to an annual average of around 80% from 2017 until 2020.

Figure 4.1 - Yearly Volume OSE

We further notice in our data that the small- and mid-cap firms on OSE are the most frequent issuers of private placements, reflecting their need for growth capital and equity financing. Lastly, our data do not include any public offerings, showing the non-existent practice of seasoned public offerings in the Norwegian equity market.

There has been a definite rise in private placements in the Swedish market the last six years. In 2016, less than 15% of all SEOs were private placements (Holderness, 2016). As Figure 4.2 shows, private placements constitute around 58% of all capital raised in 2017-2022, making it the dominant SEO type on OMX as well. Further, we notice a peak in 2021, where proceeds raised from private placements account for 89% of total SEO proceeds that year. This peak coincides with Norway and illustrates a clear increase in activity and equity financing on the two stock exchanges. One plausible explanation for the definite rise in private placements in 2021 is that both Swedish and Norwegian listed firms exploited favorable market conditions.

Figure 4.2 - Yearly Volume Nasdaq Stockholm

As opposed to Norway, some public issues have been conducted in Sweden. The average market value for these firms is substantially higher (30 BSEK) than the average for firms issuing equity privately (8 BSEK) or through rights issues (4 BSEK). This implies that small- to mid-cap firms issue equity privately, consistent with the Norwegian market. Further, the low volume of public issues indicates that large-cap companies utilize internal funds or debt financing to finance their operations and growth opportunities.

There are some noteworthy differences between the two equity markets. On average, firms on both exchanges raise approximately the same amount in private placements as in rights issues. The average relative issue size is below the threshold of 20% in both Sweden and Norway, allowing firms to rapidly conduct private placements without a prospectus requirement.

Moreover, the average discount on OSE is 14% for private placements and 17% for rights issues. On Nasdaq Stockholm, the average discount is 9% and 20%, respectively. Normally, one would expect a higher discount for rights issues compared to private placements, given the time aspect and failure risk. Therefore, the findings from the Norwegian market come as a

surprise, as the difference is relatively small. It also shows that nonparticipating shareholders on OSE experience a higher degree of dilution than shareholders on OMX. Table 2 shows descriptive statistics of SEOs on OSE and OMX.

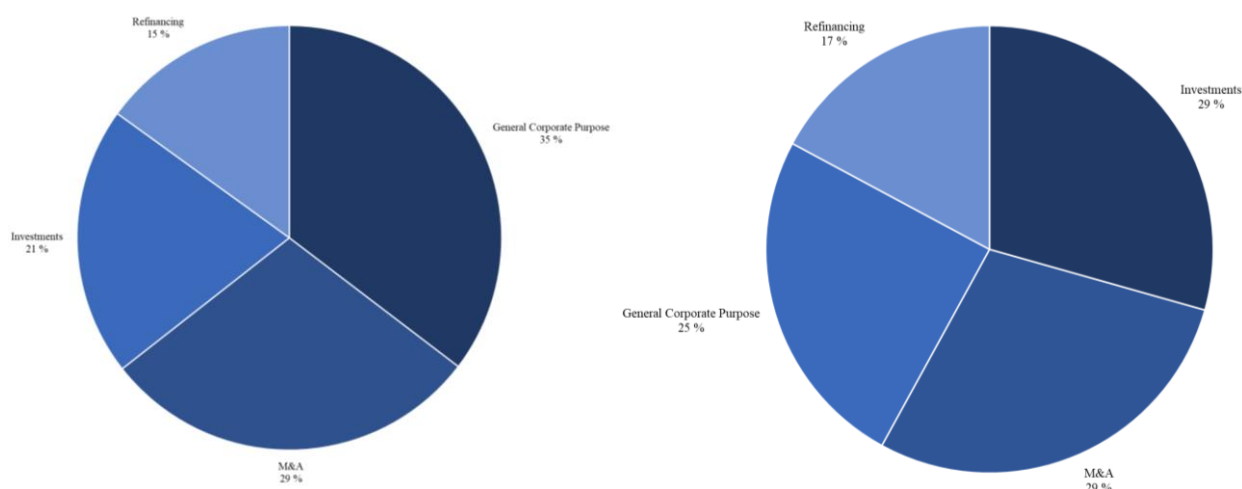
Table 2 - Descriptive Statistics of SEOs on OSE and OMX

Variable Description	Private Placement	Rights	Repair	Public
Panel A: Euronext Oslo				
Average Proceeds Amount (MNOK)	498	412	55	
Percentage of Capital Raised	86 %	13 %	2 %	0 %
Average Discount (%)	14 %	17 %	14 %	
Average relative issue size (%)	20 %	43 %	11 %	
Panel B: Nasdaq Stockholm				
Average Proceeds Amount (MSEK)	560	607		1621
Percentage of Capital Raised	58 %	38 %	0 %	4 %
Average Discount (%)	9 %	20 %		3 %
Average relative issue size (%)	11 %	34 %		7 %

4.2 Stated Use of Proceeds

It is possible that the purpose of the private placement might influence announcement returns, hence we compare the stated use of proceeds for the private placements on OSE and OMX. We have gone through the firm's intended use of proceeds and categorized the private placements on OSE and OMX into Investments, General Corporate Purposes, Refinancing and M&A. The Investment category consists of firms raising equity capital to finance investments in operating assets and other actions with the purpose to achieve organic growth. The Refinancing category consists of firms with a purpose to strengthen the balance sheet and is often related to repayment of debt. The M&A category comprises firms raising equity capital to finance acquisitions. Figure 4.3 shows the stated use of proceeds for all private placements on OSE and OMX in the period 2017-2022.

Figure 4.3 - Use of Proceeds for Private Placements on OSE and OMX



In 29% of all private placements on Euronext Oslo, firms issue equity privately to finance M&A. The other three dominant purposes are Investments (21%), General Corporate Purposes (35%) and Refinancing (15%). Firms on Nasdaq Stockholm state a similar use of proceeds compared to firms on Euronext Oslo. The two most dominant purposes for issuing equity privately on Nasdaq Stockholm are Investments (29%) and M&A (29%). We see that a similar share of private placements is done with a Refinancing (17%) purpose as in Norway.

4.3 The Use of Repair Offerings

As described in section 2.3, a repair offering is a subsequent rights offering where only existing shareholders not participating in the private placement are offered to buy shares. The purpose of a repair issue is to reduce the dilutional effect for existing shareholders, by letting them buy shares on the same terms as in the private placement. Firms are not required to offer a repair offering, but in cases with a substantial private placement discount, it can be used to justify the waiving of shareholders' preferential rights. In Norway, repair offerings are a common phenomenon, being offered subsequently to 37% of all completed private placements. If including cancelled repair offerings, the number of intended repair offerings increases to 61% of all private placements. Many of the intended repair offerings are cancelled due to the share price subsequently falling below the subscription price. A repair offering resembles a rights issue in terms of the prospectus requirement and subscription period of 14 days, inducing a risk that this might happen. In terms of value, the average repair offering raises 16% of the private placement proceeds. From these statistics, one might argue that repair offerings bring an intent

of reducing dilution, though the actual repair effect is small. Figure 4.4 shows the number of repair offerings, cancelled repair offerings and private placements on Euronext Oslo.

While private placements have become widespread in Sweden, repair offerings are non-existent. We propose two plausible explanations for this: First, a lower discount on private placements reduces the dilutional effect, and therefore reduces the need for a subsequent repair offering. Second, a larger share of capital on OMX is raised through rights issues.

Figure 4.4 - Repair Offerings on OSE

4.4 Other Remarks

There are certain transactions that heavily skew the data, and therefore are worth highlighting. In 2021, Sweden saw an enormous increase in private placements. This increase was mainly caused by a few large transactions. Sinch AB raised 15,9 billion SEK in three rounds of private placements, around 22% of the total capital raised on OMX that year. In 2022, rights offerings became the dominant SEO type. This was largely due to Securitas AB raising 9 billion SEK in a rights issue.

To summarize this chapter, private placements are the dominant SEO type in both countries in the period 2017-2022. While the use of private placements in Sweden is not as dominating as in Norway, their share of private placements is increasing. Private placements have a higher discount and a higher relative deal size on OSE compared to OMX Stockholm. The cash proceeds are on average larger for Swedish private placements compared to private placements on OSE. This might be explained by the large number of private placements in Norway and by the fact that the mean market cap for Swedish-listed firms is higher than for Norwegian-listed firms.

The stated use of proceeds is similar for private placement on the two stock exchanges. Refinancing only accounts for 15 and 17 percent, while M&A, Investments and General Corporate Purposes are in the 20-30 percent range. Though, one can wonder if managers are reluctant to state the use of proceeds when the purpose is refinancing, i.e., a negative signal to the market, and instead state General Purposes to avoid stating the true purpose of the private placement. Lastly, while repair offerings occur in Norway, their size is on average so small that the actual repair it offers seems negligible.

5. Theory and Literature Review

This section elucidates central concepts within corporate finance that we find relevant for this thesis. Furthermore, we present prevailing hypotheses, previous research, and empirical findings on private placements.

5.1 Capital Structure

One of the most important ideas within finance was developed by Modigliani & Miller in 1958. The Modigliani-Miller irrelevance theorem states that firm value is independent of capital structure and corporate leverage. Under a strict set of assumptions, both future cash flow and the cost of capital are unaffected by leverage. However, in the real world, these assumptions do not hold as firms face market imperfections such as taxes and bankruptcy costs. A higher debt-to-equity ratio provides a larger tax shield, which isolated increases firm value. At the same time, it increases the risk of bankruptcy. Therefore, debt holders require higher interest rates and shareholders require higher profits.

According to the trade-off theory (Berk & DeMarzo, 2019), firms should determine their capital structure by balancing the benefits of tax savings against the disadvantages of bankruptcy costs. The signaling hypothesis by Ross (1977) argues that managers signal a firm's true value through their financing decisions. If managers decide to issue equity, investors believe that the firm is overvalued, and therefore the share price will fall. This hypothesis is based on problems related to asymmetrical information between corporate management (insiders) and investors (outsiders). Corporate management have superior information about the firm's prospects compared to shareholders and investors. Drawing on the work by Ross, Myers and Majluf (1984) developed a ranking of a firm's financing options called the pecking order theory. According to this theory, firms prefer internal financing over debt financing, and would only issue equity as a last resort. Hence, the market reaction to a private placement should be negative due to the negative signaling effect.

5.2 Agency Issues

The corporate management and board of directors (agents) are elected to act in the best interest of their shareholders (principals). However, Jensen and Meckling (1976) argue that shareholders and managers may have different interests and goals, creating a principal-agent problem. Specifically, managers may have incentives to act in their own best interest and not only in the best interest of their shareholders. The associated costs are defined as agency costs. To alleviate such problems, Jensen (1986) argues that debt financing decreases the free cash flow available for managers and thereby enforces a better and more efficient allocation of capital. Furthermore, creditors are expected to monitor management, which also reduces agency costs.

According to Jensen and Meckling's (1976) convergence of interest hypothesis, management ownership reduces agency costs. The market reaction to a private placement that reduces management's percentage ownership should therefore be negative. If management's percentage ownership increases in a private placement, there should be a positive announcement effect due to the improved alignment of interest between shareholders and management. Regarding private placements, there is a clear agency conflict between management and small shareholders because equity is offered exclusively to large shareholders and/or outside investors. Larger shareholders are favored by management and smaller shareholders are seldom or never invited to participate in private placements.

5.3 Literature Review of Private Placements

Several studies try to explain the announcement effect and motivation behind private placements. Interestingly, many of the studies document a positive announcement return. Assuming that most private placements are made with a discount, one would expect a negative stock price reaction due to the dilution of nonparticipating shareholders and a reduction in value per share. In the following subsections, we will present the most prevailing hypotheses related to private placements.

5.3.1 Monitoring Hypothesis

Wruck (1989) suggests that the purchasers of equity in private placements are active investors who will monitor management and ensure efficient allocation of corporate resources. Thus, decreasing agency costs and increasing firm value. With a sample of 128 private placements on the New York Stock Exchange from 1979 to 1985, she documents a positive announcement return of 4.5 %.

However, Wu (2004) finds opposing evidence in a more recent study. She documents that pension and venture capital funds (i.e., institutional/active investors) decrease their ownership in private placements while other blockholders increase theirs. Assuming these two types of institutional investors contribute with more monitoring than other institutional investors, this finding is inconsistent with the monitoring hypothesis.

5.3.2 Certification Hypothesis

The certification hypothesis, introduced by Hertz and Smith (1993), presents a different explanation for the positive announcement return following private placements. They argue that a successful private placement directed to informed investors provides value certification, hence, the market reaction should be positive. According to this theory, an offer discount covers the costs for these investors of getting informed.

5.3.3 Managerial Entrenchment Hypothesis

The managerial entrenchment hypothesis serves as an opposing theory to both the monitoring and certification hypotheses. Managerial entrenchment can be described as a situation where managers take decisions that benefit themselves rather than the shareholders, such as empire building. Managers have incentives to cause their firms to grow beyond the optimal size, as growth increases managers' power by increasing the resources under their control (Jensen, 1986). Growth is often associated with increases in managers' compensation and is therefore beneficial for managers. Barclay et al. (2007) find that private placements of common stock are made to friendly and passive investors, enhancing management's control of the firm. Furthermore, the discounts serve as compensation for helping management entrench themselves. Accordingly, the expected market reaction should be negative, contradicting the previous views that private placements increase valuable monitoring and certification by active and informed investors.

5.3.4 Redistribution of Wealth

Galai and Masulis (1976) suggest that private placements redistribute wealth from shareholders to bondholders. When the loan terms are fixed, a restructuring of a firm's financing will reduce the risk of the firm and increase the value of the debt. Therefore, a redistribution of wealth following a private placement should result in a negative announcement return.

5.3.5 Shareholder Approval and Private Placement Announcement Return

Holderness (2018) shows that mandatory shareholder approval of a private placement varies across countries. By investigating public firms across 23 countries, he finds a positive average announcement effect for shareholder-approved private placements. For private placements without shareholder approval, the announcement effect is negative and 4 % lower.

He finds that the average announcement effects for private placements to insiders and outsiders in Sweden are 11.67 % and 5.10 %, respectively. In Norway, the average announcement effect is 2.66% (Eckbo & Norli, 2004). These findings suggest that national differences in corporate law and mandatory shareholder approval, as well as agency problems, affect the announcement return for private placements. In Eckbo & Norli's study of private placements during the period 1980 to 1996, the shares were issued at a premium rather than at a discount. We believe that the premium rather than a discount explains our opposing findings.

Table 3 - Theoretical Evidence on the Expected Market Reaction to a Private Placement

Hypothesis	Expected sign Private Placement
Signaling Hypothesis (Ross, 1977)	(-)
Monitoring Hypothesis (Wruck, 1989)	(-)
Certification Hypothesis (Hertzel & Smith 1993)	(+)
Managerial Entrenchment Hypothesis (Barlay et al, 2007)	(+)
Redistribution of Wealth (Galai & Masulis, 1976)	(-)

6. Hypotheses

We know from the literature review that the market reaction to private placements is shown to be positive for several countries. Studies examining the market reaction in Sweden and Norway find similar results. We start our analysis by examining the announcement returns on the main list in Norway and Sweden to see if our more recent sample confirms the previous findings. Next, we investigate a selection of event- and firm characteristics that may influence the announcement returns. Lastly, we investigate the relationship between announcement returns and the implied share price depreciation. We examine whether private placement issuances signal information beyond the implied share price depreciation and if the net informational effect differs in Sweden and Norway. Below we describe the two hypotheses and their motivation.

Hypothesis 1:

***H₀**: The cumulative average abnormal returns following a private placement announcement are equal to the implied share price depreciation.*

***H₁**: The cumulative average abnormal returns following a private placement announcement are not equal to the implied share price depreciation.*

With Hypothesis 1, we want to examine whether private placement announcements in Norway and Sweden signal information beyond the implied share price depreciation. The null hypothesis indicates no informational effects and a one-to-one relationship between the cumulative average abnormal returns and the implied share price depreciation. However, we propose that the market might in addition to the economic impact of the discount also price other information related to the private placement. We believe that the market might respond positively to private placements where active or strategic investors participate, as this might decrease agency costs and bring valuable shareholders to the firm. On the other hand, it could be that the market punishes firms for issuing equity privately because it might be perceived as a rushed way of raising capital. This could signal that the firm's financial situation is worse than expected.

Hypothesis 2:

***H₀**: The effect of the implied share price depreciation variable on the CAAR is similar in the Norwegian and Swedish market.*

***H₁**: The effect of the implied share price depreciation variable on the CAAR is greater in the Norwegian market compared to the Swedish market.*

Building upon Hypothesis 1, we want to investigate whether private placement announcements in Sweden and Norway signal different information beyond the implied share price depreciation. If the effect of the implied share price depreciation is greater in Norway compared to Sweden, it means that there are more positive informational effects from private placements in Sweden. The motivation behind Hypothesis 2 is therefore to investigate if the net informational effects of private placements differ in Norway and Sweden. We expect that the net informational effect is more positive in Sweden compared to Norway for several reasons. First, we know that a larger share of strategic and active investors is participating in private placements in Sweden compared to Norway. This may decrease agency costs, increase monitoring of management and bring valuable assets to the firms, hence be better received by the market. Second, the laws and regulations in Norway do not provide shareholders with any additional protection regarding differential treatment. In Sweden, the regulations and shareholder approval are stricter for private placements than for rights issues. Therefore, we expect the net valuation effects signaled through the private placements to be more positive in Sweden than in the Norwegian market.

7. Methodology

This section presents the methodologies used to test our two hypotheses. First, we present the event study methodology and discuss our considerations regarding CAR, estimation window and event window. Second, we present the methodology for the cross-sectional study. Last, we evaluate and present the approach of significance testing.

7.1 Event Study

The event study methodology is a frequently used statistical tool within economics and finance to measure the effect specific events have on firm value (McKinlay, 1997). Firm value can be decomposed into the firm's expected future cash flows and the discount rate used to find the present value of these. Therefore, the event should have a possibility to impact one of these two components. A fundamental concept to this methodology is the efficient market hypothesis (EMH), which states that new information in the market is immediately reflected in the stock prices (Fama, 1970). Given an extensive amount of financial data, we argue that an event study is well-suited to examine the market reaction to the announcement of a private placement.

There is no unique structure for event studies, however, we follow MacKinlay's (1997) general framework in our thesis. The initial task is to define the event of interest, which in our case is the announcement of private placements. In the sections below, we explain the next steps.

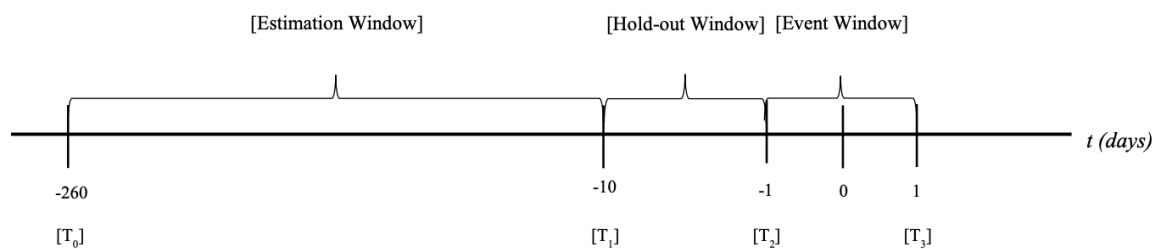
7.1.1 Event Window

The event window is the period over which the stock prices of the firms issuing equity privately will be examined (MacKinlay, 1997). It should reflect the time it takes for the market to react to the new information. We follow MacKinlay (1997), who argues for an event window that includes one day prior to and one day after the event. In this way, we can capture any leaked information prior to the event and the effect of the announcement. Private placements are announced after the market has closed, therefore, it is crucial to include the day after the event in our study. Our event window includes one day prior to the event, the event date and one day after the event.

7.1.2 Estimation Window

The estimation window is used to estimate the expected returns without conditioning on the event happening (MacKinlay, 1997). It is common to use the period prior to the event for the estimation window. With this approach, the event itself will not influence the normal returns. We follow MacKinlay (1997) and utilize an estimation window of 250 trading days, which is approximately one trading year. To prevent overlapping and biased results, our estimation window ends 10 days prior to the event. We see from our data sample that firms are often issuing equity each year or every second year. A longer estimation window would therefore induce potential biases in the expected return estimation. The event study timeline is illustrated in Figure 7.1 below, where $t(days)$ represents the number of trading days.

Figure 7.1 - Event Study Timeline



7.1.4 Measuring Abnormal Return

The abnormal return is the actual return for the security over the event window minus the normal return over the same period (MacKinlay, 1997). Therefore, appraisal of the event's effect requires a measure of the abnormal return (MacKinlay, 1997). Below, we show the formula for estimating abnormal return (AR_{it}) for firm i at trading date t relative to the event.

$$AR_{it} = R_{it} - E(R_{it})$$

We apply the market model to estimate normal returns. As a proxy for the market return, we use the MSCI World Index for both Euronext Oslo and Nasdaq Stockholm. Since investors have the possibility to invest in the whole world, we argue that MSCI is better to use than OSEBX and OMX Stockholm 30. The market model is a one-factor model relating the return of security i to the return of the market portfolio (MacKinlay, 1997). MacKinlay (1997) argues that this model is the preferred one since the variance of the abnormal return is reduced when removing the return related to variation in the market's return. This enhances the model's ability

to measure the event effects. The mathematical equations for the market model are shown below:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

$$E(\varepsilon_{it}) = 0 \quad \text{var}(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$$

R_{it} are the returns for security i at time t , while R_{mt} are the returns for the market portfolio at time t . The error term for security i at time t ε_{it} has an expected value of zero and a variance of $\sigma_{\varepsilon_i}^2$. The intercept $\hat{\alpha}_i$ and coefficient $\hat{\beta}_i$ are estimated in the estimation window by regressing firm i 's return on the market portfolio's return.

After estimating the normal returns and the parameters in the market model, we measure abnormal returns with the following formula:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})$$

To be able to draw inferences, the abnormal return observations must be aggregated through both time and across firms. Further, we calculate the cumulative abnormal returns with the following formula:

$$CAR(t_1, t_2) = \frac{1}{N} \sum_{t=t_1}^{t_2} AR_{it}$$

The cumulative abnormal return $CAR(t_1, t_2)$ is the average cumulative abnormal return between t_1 and t_2 for the sample. N in the equation above is the number of firms. The equation clearly illustrates that the average cumulative abnormal return is the average of the sum of abnormal returns within the time span.

7.2 Cross-Sectional Study

A cross-sectional analysis investigates the relationship between the abnormal return and several characteristics related to the event. Therefore, it provides valuable insights into the drivers behind the abnormal returns (MacKinlay, 1997). By regressing the abnormal returns on the explanatory variables (characteristics) of interest, we find the explanatory power of each variable. The formula below illustrates a cross-sectional regression model with N abnormal return observations and M characteristics:

$$CAR_j = d_0 + d_1x_{1j} + \dots + d_Mx_{Mj} + h_j$$

CAR_j are the different cumulative abnormal return observations, x_{1j} and x_{Mj} denotes firm specific characteristics for the j^{th} observation. The zero mean disturbance term h_j is uncorrelated with explanatory variables. The ordinary least squared (OLS) method assumes that the error term is homoscedastic and cross-sectionally uncorrelated with the X 's. MacKinlay (1997) advises using heteroskedasticity-consistent standard errors since the homoscedasticity assumption often is violated. Therefore, we follow Halbert White (1980)'s approach and apply heteroscedasticity robust standard errors in our OLS estimation. Moreover, there might be a relation between firm characteristics and the anticipation of a private placement, which introduces a selection bias. More specifically, the market's expectation will be an omitted variable, hence the OLS estimators will be inconsistent. Despite this problem, Prabhala (1997) argues that an OLS approach under weak conditions can be used for inferences (MacKinlay, 1997). Furthermore, he states that the t-statistics provide a lower bound on the significance level.

7.2.1 Significance Testing

There are two ways to test whether our results are significantly different from zero, parametric and nonparametric tests. The main difference between the two lies in their assumptions. While a parametric test assumes a normal distribution of the abnormal returns, the nonparametric test does not have this assumption (MacKinlay, 1997). There is no consensus in the literature for which type of test is the preferred one. However, both types of tests are typically included to test for statistical significance. Following Barber et al. (1999), we utilize both t-test (parametric) and Wilcoxon signed-rank test (nonparametric) in the analysis to enhance the robustness of our results.

8. Data

The following section clarifies how we collected, filtered, and categorized the data sample used in our analysis. We discuss the rationale behind these steps and present the data sample with descriptive statistics. Additionally, we provide a comprehensive explanation for the selection of specific variables used in our research.

8.1 Data Sample

In the spring of 2023, neither Euronext nor Nasdaq stores any data on new issuances on their exchanges. Moreover, data previously available on Oslo Stock Exchange are no longer publicly available. We therefore chose to rely on Deal Screener from Refinitiv Workplace (LSEG), as it contains a large set of transactions, and hundreds of variables with a high degree of data for each transaction while being quick and user-friendly. We cross-examine all our observations with information published on NewsWeb and Company News¹. Due to insufficient stock prices for the corresponding transactions, we collect the firm's stock prices from Datastream and merge them with the transaction data from Refinitiv.

Our initial data sample consists of 520 observations for the Oslo Stock Exchange and 410 observations for the Stockholm Stock Exchange, totaling 930 observations from the two exchanges. To get a clean data set and to avoid misregistration and sample bias, we introduce the following selection criteria. The change in the total number of transactions is shown in parentheses.

1. Remove secondary-, public-, rights- and employee offerings (-229).
2. Add private placements found on either NewsWeb or Company News, not present in the existing data (+19).
3. Remove firms not listed on the main market in Sweden or Norway (Euronext Growth, First North Stockholm, etc.) (-134).
4. Remove private placement not settled in cash, i.e., consideration for M&A (-54).
5. Remove private placements with coexisting events around the announcement date (-85).
6. Remove private placement without return data available (-93).
7. Remove private placements raising gross proceeds less than 10 MNOK/MSEK (-18).

¹ NewsWeb and Company News refer to the website for Euronext and Nasdaq where the listed firms release their announcements.

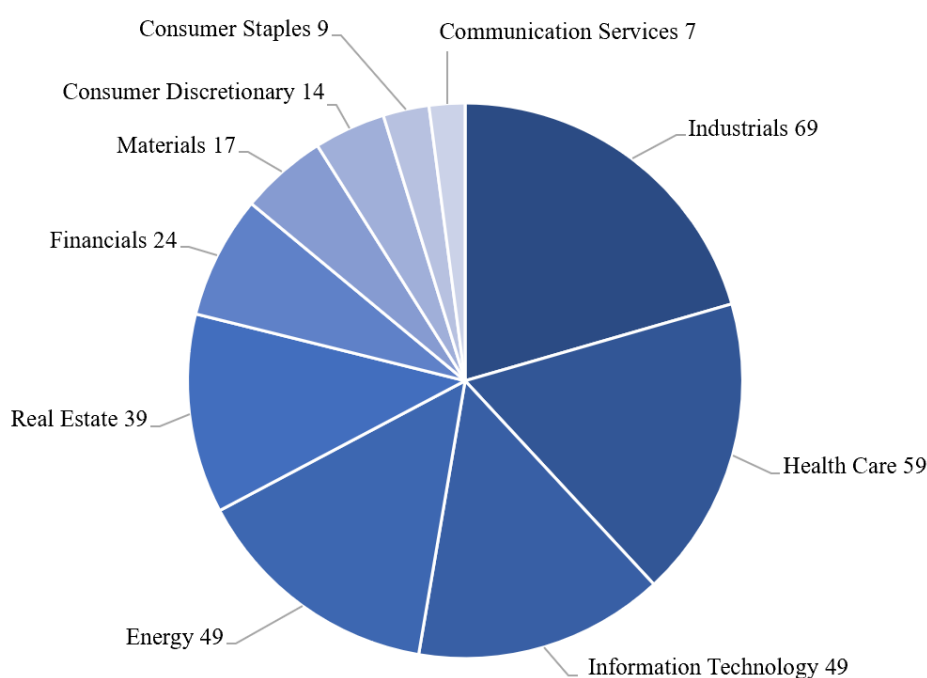
Since our research focuses on private placements with settlement in cash on the main lists in Sweden and Norway, we remove all other irrelevant transactions. To eliminate any risk of bias in our sample, we remove private placements with contemporaneous events around the announcement that potentially could affect the market reaction. After the strict filtration, our data consists of 188 private placement transactions on OSE and 148 private placement transactions on OMX. The total number of transactions is 336.

To further improve the data set, we manually adjust for missing data and other shortcomings. The Refinitiv data has a YES/NO variable for private placements and rights offerings. We manually check and categorize transactions missing an SEO description. This verifies that all private placements are included. We also check outliers and other missing data values and adjust when necessary. To verify the data variables, we use firm announcements on Euronext and Nasdaq's websites. Lastly, to match the market composition data, we change the industry categorization into the Global Industry Classification Standard (GICS).

8.2 Description of the Sample

The final sample consists of 336 private placement transactions between 2017 and 2022, with a distribution of 188 transactions on Euronext Oslo and 148 on Nasdaq Stockholm. Figure 8.1 shows the final sample categorized by sector.

Figure 8.1 – Number of Private Placement Distributed on Sector



Since the Industrials sector is a large part of both exchanges, it is no surprise this sector has the most private placements. Though the number of private placements in the Health Care sector might come as a surprise. Compared to the data provided in section 3.2 Market Composition, both the Health Care and the Information Technology sector are overrepresented in the number of private placements in the sample. Health Care represents only 1% of OSE and 6% of OMX, while Information Technology represents 2% and 5%. The overrepresentation of Health Care transactions indicates that firms in this sector are more dependent on additional equity financing than other sectors.

In terms of the intended use of proceeds, the most common reason is Investments, with 116 transactions. The second most common reason is General Corporate Purposes, with 111 private placements. M&A represents 65 transactions while Refinancing has the fewest with 39 transactions.

As Table 4 shows below, there is a clear difference in deal-specific characteristics between the two stock exchanges. Most notably a higher discount in Norway compared to Sweden and a higher relative issue size, meaning the number of shares issued relative to shares outstanding before the private placement. This results in a higher dilution for the non-participating shareholders in Norway compared to Sweden. This is also seen by the average implied share price depreciation of 6,23% in Norway compared to 4,56% in Sweden.

Furthermore, private placements in Norway are on average conducted by smaller companies with a lower return on equity compared to the companies on the Swedish exchange. The low and negative profitability of the private placement firms in both countries might indicate that the firms issuing equity privately might not have other options, in line with the pecking order theory.

Table 4 - Descriptive Statistics of the Private Placement Sample

Variables	Norway			Sweden		
	N	Mean	Median	N	Mean	Median
Proceeds Raised (MNOK, MSEK)	188	506	260	148	542	241
Subscription Price Discount	188	9,1 %	6,0 %	148	6,1 %	5,4 %
Relative Issue Size	188	17,1 %	10,9 %	148	11,3 %	9,1 %
Implied Share Price Depreciation	188	6,2 %	4,8 %	148	4,6 %	4,9 %
Market Capitalization (MNOK, MSEK)	185	4467	1664	144	6439	2959
Return on Equity	165	-4,3 %	-0,8 %	141	-0,3 %	0,1 %

Table 5 shows the annual distribution of the data sample. 2020 and 2021 are the years with the most transactions, plausibly due to the strong equity capital market these years. Except for this, there are no given outliers in our data sample. 2017 has a higher occurrence of large private placements, in terms of shares issued relative to shares outstanding.

Table 5 - Yearly Distribution of the Private Placement Sample

Variables	2017	2018	2019	2020	2021	2022
Number of Private placements	32	49	53	71	89	42
Average Subscription price discount	7,5 %	5,8 %	9,6 %	9,9 %	6,1 %	7,9 %
Average Relative issue size	20,2 %	11,8 %	13,9 %	15,3 %	12,8 %	16,7 %
Average Implied share price Depreciation	4,3 %	5,0 %	6,8 %	6,3 %	4,4 %	6,1 %
Average Return on Equity	-1,7 %	-3,0 %	-2,6 %	-4,2 %	-1,2 %	-2,2 %

8.3 Variables Used in the Cross-Sectional Analysis

To attain a better understanding of the factors influencing the post-announcement returns, we select multiple variables in an attempt to find characteristics that explain the market reaction in both Norway and Sweden. In the following section, we present the chosen variables and explain their motivation.

8.3.1 Subscription Price Discount (%)

As shown in Table 4, private placements are often issued at a discount relative to the prevailing market price. Isolated, this will effectively reduce the value per share and have a dilutional effect on nonparticipating shareholders. We therefore include this variable to see if this assumed relation between the discount and CAR is evident in our data. The subscription price discount is calculated with the following formula:

$$\text{Subscription price discount} = 1 - \left(\frac{\text{Subscription price}}{\text{Share price}_{\text{closing price pre issue}}} \right)$$

8.3.2 Relative Shares Issued (%)

The relative shares issued variable is the number of new shares issued relative to the number of shares outstanding pre-issue. The higher this variable is, the more ownership dilution will nonparticipating shareholders face. However, the cash proceeds from the private placement offset this effect. We include the relative shares issued variable to examine the effect of ownership dilution on CAR. The variable is calculated with the following formula:

$$\text{Relative shares issued} = \frac{\text{Shares outstanding}_{\text{pre issue}}}{\text{Shares outstanding}_{\text{pre issue}} + \text{New shares issued}}$$

8.3.3 Implied Share Price Depreciation (ISPD) (%)

This variable represents the mechanical share price reduction after a private placement issued at a discount. As discussed in section 2.3, the implied share price depreciation depends on the subscription price discount and the number of shares issued relative to shares outstanding pre-issue. Ceteris paribus and assuming no informational effects from the private placement, we expect that the share price decreases with the implied share price depreciation. We include this variable to see if this presumption is correct. If not, it means that private placement issuances

signal negative or positive information that affects firm value. The definition of the variable is presented below:

$$ISPD = \text{Subscription Price Discount} \times \text{Relative Shares Issued}$$

An example of the implied share price depreciation is shown in Appendix B.

8.3.4 Market Capitalization

We also include market capitalization as a variable to investigate any potential relation between firm size and CAR. To get a better fit and interpretation of the coefficient, we calculate the natural logarithm of this explanatory variable. One unit change in Market Capitalization tells us little about the true impact on CAR.

Larger and more mature firms are often more financially sound than smaller firms. The risks may also be lower. Therefore, it could be that investors have stronger beliefs in larger firms and that the announcement returns for these firms are more positive than smaller firms. Aligning with the pecking order theory, investors could also expect larger firms to be less dependent on equity financing, hence the market penalizes larger firms more.

8.3.5 Dummy Repair

As shown in section 2.3, repair issues are offered on the same terms as in the private placement to compensate nonparticipating shareholders for the dilution effect. We also know that this offering type is only apparent in Norway. Section 4.3 shows that the average repair issue raises only 16 % of the private placement proceeds, hence the compensation effect is small on average. There is also a risk that the repair issue will be cancelled if the share price falls below the subscription price. However, we want to investigate if firms announcing a repair offering in Norway experiences higher or lower announcement returns than the no-repair group. The dummy variable takes the value of 1 for all Norwegian firms announcing a subsequent repair offering together with the private placement. For the no-repair group, the dummy variable is 0.

8.3.6 Dummy Use of Proceeds

We propose that the purpose of private placements might influence the announcement returns. The different use of proceeds we have included is Investments, M&A, Refinancing and General Corporate Purposes. A specific investment motive may contribute to growth in earnings and future free cash flow, while a refinancing motive might verify that a firm is in financial distress

or decrease the likelihood of bankruptcy. We introduce these variables to get a better understanding of the relationship between these variables and the CARs. Further, we use General Corporate Purposes as the base category we compare the other categories with.

8.3.7 Proceeds Raised (MNOK) (MSEK)

The amount of capital raised in the private placement might influence the announcement returns. We include the natural logarithm of this variable to see if such a relationship is evident in our data. Further, we expect a high correlation between this variable and market capitalization, as we believe larger firms raise more capital.

8.3.8 Dummy Industry

It may be favorable for specific industries to raise capital quickly through private placements. This could go for capital-intensive and contract-based industries such as energy and shipping, where the capital need is larger and more difficult to foresee. It may be that the market understands these mechanics and reacts more positively towards firms in specific industries that conduct private placements. We introduce the industry variable to examine any potential relations between different industries and CAR. Consumer Discretionary is used as the base category we compare the industry dummy variables against.

8.3.9 Return on Equity (ROE)

We include the profitability measure ROE to investigate whether private placement firms' profitability influences the announcement returns. Normally, firms' operating performance and financial performance go hand in hand. One thought is that firms with high profitability provide a high return on the cash proceeds from the private placement. Another possibility is that such firms are expected to make use of internal funds or take on more debt, aligning with the pecking order theory. Thus, the market reacts more negatively when these firms raise capital through private placements. The variable is calculated with the formula below:

$$ROE = \frac{\textit{Net income}}{\textit{Market Capitalization}}$$

8.3.9 Dummy Oslo Stock Exchange

To further investigate the differences in the abnormal returns between the two countries, we include a dummy variable that takes the value 1 for Euronext Oslo and 0 for Nasdaq Stockholm. The coefficient of this variable represents the average difference in announcement returns for OSE private placements compared to OMX private placements.

8.3.10 Interaction Dummy (ISPD x Dummy Oslo Stock Exchange)

We introduce this interaction dummy to examine if the effect of the implied share price depreciation variable on the CAAR is different in the Norwegian market compared to the Swedish market. Related to hypothesis 2, this interaction variable will also implicitly tell how the net informational effects from private placements differ in Norway compared to Sweden. The interaction dummy's coefficient represents the additional effect Norwegian private placements have on CAR if the ISPD change, compared to Swedish private placements.

9. Results

In this chapter, we present and discuss the findings from the event study and the cross-sectional regressions. First, we analyze the results from the event study in light of existing literature, extant studies and differences between the two equity markets. Next, we discuss the findings from our cross-sectional study. Here, we focus on our two hypotheses and try to explain the different market reactions to private placements in Norway and Sweden.

9.1 Short-Run Cumulative Abnormal Returns

Figure 9.1 shows the CAAR for our entire sample of private placements on Euronext Oslo and Nasdaq Stockholm in the period between January 2017 and December 2022. The announcement of private placements is presented after the market closes on day 0, hence the market reacts to the announcement on day 1. The abnormal returns on day 0 are potentially due to leakage of the private placement announcement. In a $[-1,1]$ event window, we find a significantly more negative CAAR for private placements conducted on Euronext Oslo compared to those on Nasdaq Stockholm. Firms listed in Sweden report an insignificant CAAR of -0.5% for the event window, while Norwegian-listed firms report a significant CAAR of -5.4%.

Figure 9.1 - Cumulative Average Abnormal Returns for both Stock Exchanges $[-1,1]$

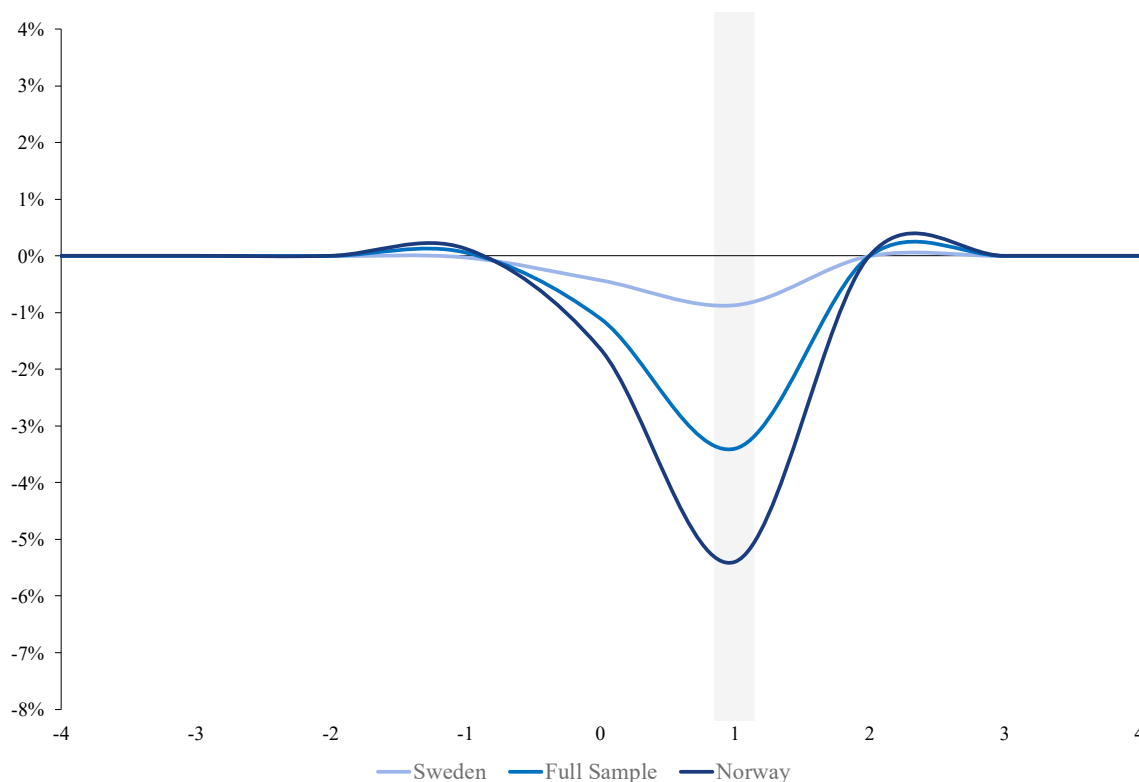
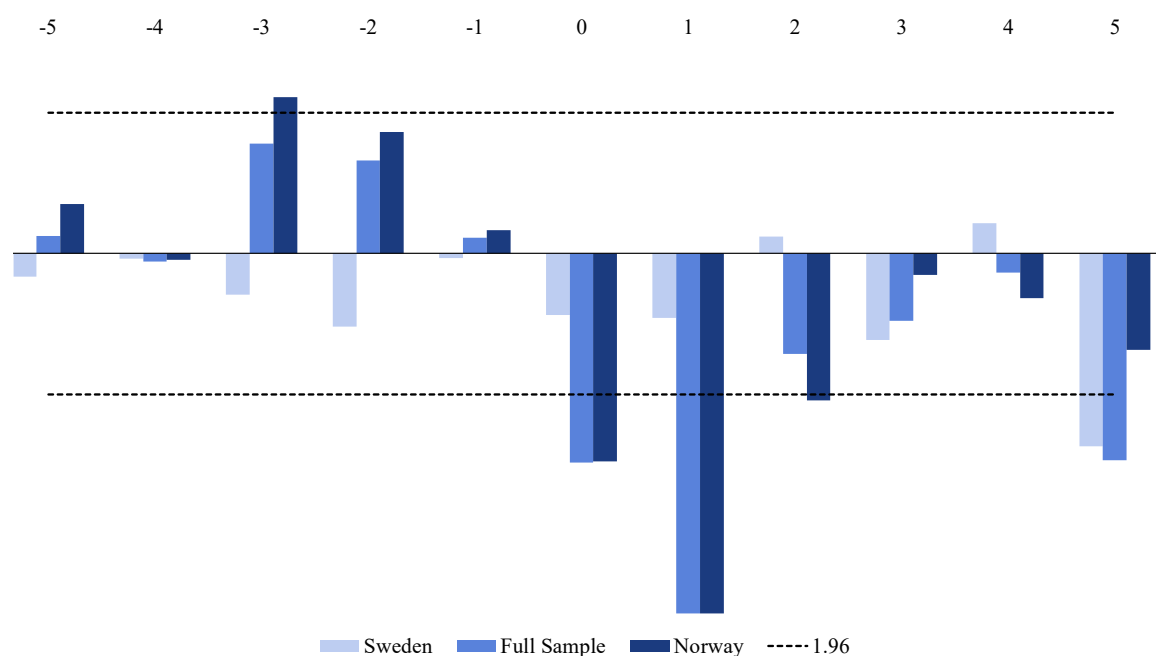


Figure 9.2 presents the statistical significance of the daily abnormal returns for each of the two exchanges. From this, we can conclude a significant abnormal return for the Norwegian private placements, while the abnormal returns for the Swedish private placements are insignificant. These results hold when applying the Wilcoxon Signed Rank Test (see Appendix F). There are two possibilities for an insignificant result. One is that there are no abnormal returns following private placement announcements in Sweden. The other alternative is that there is a negative market reaction in Sweden, but not strong enough evidence to conclude that the finding was not random. This means that the hypothesis of a zero CAAR in Sweden cannot be rejected.

Figure 9.2 – The Statistical Significance of Daily Abnormal Returns



NOTE. – Figure 9.2 illustrates t-values for Nasdaq Stockholm, Euronext Oslo, and full sample five days prior to and post event date. The stapled lines represent a 5% significance level (± 1.96).

We conclude that the cumulative average abnormal return for Euronext Oslo is significantly different from 0. Furthermore, firms listed on Euronext Oslo have a more negative market reaction than firms listed on Nasdaq Stockholm. In 9.2.2 we further discuss the significance between the two markets.

Our findings are inconsistent with several of the previous studies that obtain and explain positive announcement returns, such as the monitoring- and certification hypothesis. Wruck's (1989) monitoring hypothesis explains the positive market reaction with decreased agency cost

and enhanced monitoring due to active investors increasing their ownership through private placements. We have the impression that private placements on Euronext Oslo typically are directed to many passive investors, who do not contribute to increased monitoring of the firm. We further believe that this might explain our opposing findings to Hertz and Smith's (1993) certification hypothesis, which suggests that informed investors provide a value certification. That is, in Norway, the passive investors' investment in the private placement may not be perceived as well-informed.

The result from the event study provides some support for the managerial entrenchment hypothesis proposed by Barclay et al (2007). In their study of U.S. firms, less than 4% of the private placements were directed to more than five investors and more than 50% were directed toward one single investor. Targeting one or only a few friendly and passive investors may reflect empire building and manager entrenchment. We argue that it is more beneficial for managers to direct a private placement towards a single or a few friendly and passive investors if empire building and management entrenchment is the target. These investors will have a larger ownership stake, which can help management solidify their control of the firm. The explanation for why passive investors would allow empire building and entrenchment is that they get to buy at a big discount, which makes it worthwhile. We consider it less likely that a large number of participants will be friendly, discourage takeover bids and never oppose management's wishes. On the other hand, many passive investors might lead to a situation where no one takes responsibility. However, the fact that a large number of participants are passive might help management entrench themselves. It is possible that management entrenchment is the reason behind the negative market reaction in Norway.

Our results support both the signaling hypothesis by Ross (1977) and the pecking order theory by Myers and Majluf (1984). Stating that managers signal a firm's true value through its financing decisions, the market penalizes the equity issuance as investors believe the firm is overvalued or does not have other financing options than issuing equity. Moreover, our results coincide and support economic intuition. We know that, on average, private placements are issued with a discount of 9.1% on OSE and 6.1% on OMX. With an average implied share price depreciation of 6.2% and 4.6%, the announcement returns should be negative unless there are strong positive informational effects countering it. Our understanding of the results is therefore that the mechanical share price reduction of the private placements contributes to a negative market reaction. To further elaborate, the announcement returns in Norway and Sweden should

equal -6.2% and -4.6%, respectively, given no positive informational effects. Since we find announcement returns in Norway and Sweden of -5.4% and -0.5%, we argue that the informational effect from the private placements is more positive in Sweden compared to Norway. However, we cannot conclude at this point. In the cross-sectional study in section 9.2.2 we further investigate the informational effects in the two markets.

Industry professionals argue that private placements in Sweden are directed to a larger consortium of investors. More specifically, a mix of strategic and active investors, as well as passive investors. Letting a few large active or strategic individuals become owners may reduce agency costs and add valuable resources to the firm. It can also serve as a value certification. This can explain why Swedish private placements result in less negative market reactions compared to Norwegian private placements. Furthermore, we believe this contributes to a more positive informational effect and can serve as a partial explanation for our findings on OSE and OMX.

Lastly, shareholder protection and the laws and regulations might also be a factor influencing the announcement returns. As discussed in section 3.1.3, Sweden has stronger shareholder protection than Norway, making it easier for Norwegian firms to carry out private placements that exploit existing shareholders. Moreover, this can potentially increase agency problems, as management can more easily take advantage of their own positions and be more concerned about their own gain rather than maximizing value for all shareholders. A specific example is that managers in Norwegian listed companies can more easily participate in favorable private placements that are not shareholder approved but carried out with board authorization.

9.2 Cross-Sectional Regression Full Sample

To attain a more comprehensive understanding of the results from the event study, we conduct cross-sectional regressions with CAR as the dependent variable and the variables explained in section 8.3 as explanatory variables. Examining the relationship between CAR and these variables lets us identify how they affect the announcement returns and the strength of the effect. We are particularly interested in the relationship between CAR and the *Implied Share Price Depreciation (ISPD)*, consistent with our first hypothesis. Moreover, we study the interaction between the *ISPD* and *Dummy Oslo Stock Exchange* to examine whether the effect of the *ISPD* is different in the two markets, aligning with our second hypothesis. Table 6 shows the results from the first regression.

Table 6- Cross-Sectional Regression – Cumulative Abnormal Return

	<i>Dependent variable:</i>		
	Cumulative Abnormal Return		
	(1)	(2)	(3)
Subscription Price Discount	-0.519 ^{***}		
Relative Shares Issued	-0.097 [*]		
Implied Share Price Depreciation		-0.620 ^{***}	-0.273 ^{**}
Implied Share Price Depreciation x Dummy Oslo Stock Exchange			-0.501 ^{***}
Dummy Oslo Stock Exchange	-0.038 ^{***}	-0.036 ^{***}	-0.012
Dummy Repair	-0.002	-0.008	-0.002
(ln) Market Capitalization	-0.005	-0.010 [*]	-0.008
(ln) Proceeds Raised		0.007	0.005
ROE	0.038	0.030	0.024
Constant	0.144 ^{***}	-0.029	-0.016
Observations	302	302	302
R ²	0.254	0.222	0.246
Adjusted R ²	0.239	0.206	0.228

Note:

* p<0.1; ** p<0.05; *** p<0.01

As regression (1) shows, we find that a 1% increase in *Subscription Price Discount* and *Relative Shares Issued* leads to a 0.519% and 0.097% decrease in CAR. The first is statistically significant on a 1% level, while the second variable is only significant on a 10% level. The coefficient of the *Dummy Oslo Stock Exchange* variable captures the average difference in

announcement returns for private placements conducted on OSE compared to OMX. The coefficient in regression (1) shows that OSE private placements on average experiences a 0.038% more negative CAR than OMX private placements. This finding might come as a surprise given the larger difference in CAAR in the event study. However, the cross-sectional regression controls for the effect of other explanatory variables which can differ between the two countries. Thus, the cross-sectional regression isolates the country effect on announcement returns.

9.2.1 Implied Share Price Depreciation and Announcement Returns

Table 6 shows that the *ISPD* variable is significantly different from 0. However, we must check whether the *ISPD* is significantly different from -1, as this makes it possible for us to reject the first null hypothesis and state that private placements have informational effects. To check whether the *ISPD* differs from -1, we calculate the p-value, the probability of having found an *ISPD* of -0.680 in our sample, while the null hypothesis is true, i.e., if $ISPD = -1$ for the population. The p-value is close to zero with a value of 1.71^{-6} , so the null hypothesis does not hold. The implied share price depreciation does not equal -1 for the full sample. Based on this, we reject the null hypothesis in Hypothesis 1 and conclude that there is not a one-to-one relationship between the *ISPD* and CAAR.

We find that for every 1% increase in the *ISPD*, CAR decreases by 0.620%. The *ISPD* is therefore the predominant variable explaining the negative CAR. It must be noted that the key driver behind this variable is the *Subscription Price Discount*, which is apparent with a 92% correlation (see Table 9- **Correlation Matrix**) and the large coefficient in regression (1). Our results show that the Norwegian and Swedish markets react less negatively than expected since the coefficient is larger than -1. This means that the private placement announcements on OSE and OMX signal positive information, which counters the mechanical share price reduction.

The implication of this finding is that issuing firms experience lower indirect flotation costs, making private placements even more cost-effective compared to rights issues. This is also beneficial for nonparticipating shareholders since the economic dilution decreases. Together with all other benefits, this finding could serve as a partial explanation for the widespread use of private placements in Norway and Sweden.

9.2.2 Informational Effects from Private Placements in Norway and Sweden

Regression (3) shows the effect of the interaction variable *ISPD x Dummy Oslo Stock Exchange* on CAR. As described in section 8.3.10, the interaction term shows the additional effect Norwegian private placements have on CAR if the *ISPD* change, compared to Swedish private placements. For OSE private placements, we find that the *ISPD* variable has a 0.501 % more negative impact on CAR, on average, compared to OMX private placements. This finding is statistically significant on a 1% level. The only feasible explanation for this finding is that the informational effect from OMX private placements is more positive, on average, compared to Norwegian private placements. The *ISPD* coefficient for the full sample, meaning both OSE and OMX private placements, is -0.62, indicating that a one percent increase in the *ISPD* reduces CAR by 0.62%. The interaction variable's effect is almost as large as the *ISPD* variable's effect on CAR for the full sample, and significant on a 1% level. We therefore reject the null hypothesis in our second hypothesis and conclude that the effect of the *ISPD* variable on CAR is greater in the Norwegian market compared to Sweden. Further, we conclude that the informational effect from private placement announcements is more positive in the Swedish market compared to Norway.

As discussed in section 9.1, we propose two plausible explanations for these findings. First, a larger share of active investors participates in the private placements on OMX, which may reduce agency costs and increase firm value. Second, strategic investors with industry knowledge might be valuable for the firms to get as shareholders to improve governance and increase the prospects of the firm.

9.2.3 Other Explanatory Variables

Interestingly, the coefficient of the *Dummy Repair* variable is weak and statistically insignificant in all three regressions. This means firms announcing that they plan to conduct a subsequent repair offering in addition to the private placement do not experience a significantly different CAR on average, compared to firms conducting private placements without a repair offering. We would expect firms planning to compensate existing shareholders with a repair issue to receive a more positive market reaction than firms that do not. We propose two plausible explanations for this finding. First, we know from section 4.3 that the repair effect is small relative to the private placement and that many repair offerings are cancelled. Second, we know that the average discount and implied share price depreciation are substantially higher for the repair issue group compared to the no repair issue group. This indicates that the repair group

consists of more discriminatory private placements than the no repair issue group. Hence, a possible explanation for the insignificant repair dummy is that firms issuing equity privately with a high discount, announce an intent of conducting a repair offer only to justify the private placement in line with OSE regulations.

Somewhat surprisingly, we find weak and insignificant results for *(ln) Proceeds Raised*. This means that deal size does not seem to affect the announcement returns. Regarding firm size, we find that a 1% increase in *(ln) Market Capitalization* is associated with a 0.01% reduction in CAR. This finding is only statistically significant on a 10% level and implies that larger firms are more inclined to negative announcement returns. Larger firms are often more financially sound and might have other financing alternatives such as debt and retained earnings, compared to smaller firms. We believe that investors expect larger firms to be less dependent on equity financing, hence the market penalizes larger firms more. Further, we find no significant relationship between ROE and CAR. We therefore cannot conclude that a firm's profitability has an impact on the announcement returns.

9.3 Cross-Sectional Regression – Use of Proceeds

In Table 7 below, we include three dummy variables for the stated use of proceeds in the cross-sectional regression together with the significant findings presented previously. The motivation for including the stated use of proceeds is to examine whether the purpose of the private placement influences CAR. The baseline dummy is General Corporate Purposes, hence the coefficients represent the average difference in CAR between the reference dummy and the Refinancing-, Investments- and M&A dummy. Surprisingly, we only find one statistically significant result from the different stated use of proceeds categories. We find that the Investments category has a coefficient of -0.023 significant on a 5% level. This means that the group of firms stating Investments as the reason for the issue experiences 0.023% more negative post-announcement returns, on average, compared to firms stating General Corporate Purposes. We expected the Refinancing category to have the most negative effect on CAR and the Investment category to have the most positive effect. It is important to emphasize that the announcement returns for the different use of proceeds are related to the market's expectations of the different groups of firms and not the purpose itself. For the Refinancing category, financial distress is already priced, hence it could be that the market reacts positively as these firms are able to raise capital on relatively good terms despite a difficult situation.

However, our regression results suggest that the only category significantly influencing CAR is the Investment category. We propose two plausible explanations for this finding. It could be that the market expects these firms to finance growth opportunities with internal funds or debt financing. Another possibility is that the market has low confidence in the proposed investments in our sample, hence penalizing these firms more.

Table 7 - Cross-Sectional Regression: Use of Proceeds

	<i>Dependent variable:</i>	
	Cumulative Abnormal Return	
	(1)	(2)
Subscription Price Discount	-0.380 ^{***}	
Relative Shares Issued	-0.116 ^{***}	
Implied Share Price Depreciation		-0.680 ^{***}
Dummy Oslo Stock Exchange	-0.046 ^{***}	-0.039 ^{***}
(ln) Market Capitalization		-0.004
UOP: Investments	-0.021 [*]	-0.023 ^{**}
UOP: M&A	0.003	-0.002
UOP: Refinancing	0.018	0.007
Constant	0.127 ^{***}	0.065 ^{**}
Observations	336	329
R ²	0.230	0.302
Adjusted R ²	0.216	0.289
<i>Note:</i>	* p<0.1; ** p<0.05; *** p<0.01	

9.4 Cross-Sectional Regression – Industries

In Table 8 below, we include dummy variables for the most common industries to examine any potential relationships between industries and CAR while controlling for all the previous significant variables. The Materials industry has a negative coefficient significant on a 10% level, while we do not find any statistically significant results for the other industries. This implies that the firms within these industries do not, on average, experience a different CAR than the baseline industry.

Table 8 - Cross-sectional Regression: Industry

	<i>Dependent variable:</i>	
	CAR	
	(1)	(2)
Subscription Price Discount	-0.393 ^{***}	
Relative Shares Issued	-0.137 ^{***}	
Implied Share Price Depreciation		-0.662 ^{***}
Dummy Oslo Stock Exchange	-0.046 ^{***}	-0.041 ^{***}
UOP: Investments	-0.025 ^{**}	-0.021 ^{**}
Industrials	0.016	0.0003
Health Care	-0.002	-0.002
Information Technology	-0.024	-0.029
Energy	-0.006	0.003
Real Estate	0.015	0.005
Financials	-0.018	-0.016
Materials	-0.053 [*]	-0.052 [*]
Constant	0.153 ^{***}	0.042 ^{**}
Observations	336	336
R ²	0.256	0.304
Adjusted R ²	0.231	0.282
<i>Note:</i>	* p<0.1; ** p<0.05; *** p<0.01	

To conclude, we find no statistically significant relationships between specific industries and CAR. An important result from these regressions is that the previous findings hold when controlling for the stated use of proceeds and industry categorization.

10. Assessment of Robustness

In this section, we discuss the limitations and assess the robustness of the two studies conducted. For the event study, we discuss the sample collection, biases, and other potential shortcomings. For the regression analysis, we discuss outliers, heteroskedasticity, multicollinearity and sample size to assess the robustness of the cross-sectional analysis. Appendix A specifies the OLS assumptions.

10.1 Limitations of Event Study

While the event study is a widely employed method, it is important to be aware of potential disadvantages and pitfalls that may arise during its implementation. One significant limitation pertains to data quality and accuracy. There is always a risk of encountering data limitations, such as inaccurate dates, stock prices, and other variables obtained from sources like Refinitiv. To mitigate this risk, manual inspections were conducted to ensure the accuracy of announcement dates, stock prices, and other necessary variables. Another critical aspect to consider is the correct identification of the event window, as emphasized by MacKinlay (1997). To ensure the accuracy of the event dates, meticulous manual inspections were performed by cross-referencing the data with information from firm websites and stock exchange websites.

Furthermore, there may be an unknown selection bias present in the data collected from Refinitiv. To mitigate this risk, any missing events published on the stock exchange websites were included to minimize the potential for selection bias. Additionally, it is worth noting that the data collected for the study resulted in a relatively small sample size, which may lead to non-statistically significant results in certain subsamples. This highlights the importance of cautiously interpreting the statistical power and generalizability of the findings. To ensure the event window effectively captures the announcement and its market reaction, a specific period is considered. In this study, two trading days prior to the announcement, day 0, and day -1 are included to account for potential leakage of the announcement. Since the thesis focuses on short-term market reactions, one day after the announcement, denoted as +1, is used to assess the short-term impact.

The market model employed to estimate the expected return may introduce biased estimates. Given that each firm is unique, finding an appropriate substitute for each firm can pose challenges. In this study, the global index was chosen as a benchmark when estimating the

expected return for each firm. Although there is a possibility of an inaccurate benchmark, the analysis of daily returns suggests that the chosen benchmark is sufficient. Additionally, the event study was also conducted using stock exchange-specific indexes as benchmarks (OSEAX, OMXSPI), with no significant difference observed in the results.

By acknowledging these limitations and taking necessary precautions, such as conducting manual inspections, considering potential biases, and selecting appropriate benchmarks, the event study can yield more reliable and informative results.

10.2 Limitations of Cross-Sectional Analysis

10.2.1 Treatment of Outliers

When inspecting the final data sample, some events had outliers in the data. As described in section 8.1, a thorough filtration was made to the original data. Further removal of data was therefore carefully considered. We decided to replace the most extreme values of CAR, and explanatory variables using the winsorizing method on a 1% level, as the most extreme values are considered outside the range of normal random sample variations. We visualize the dependent variable (CAR) and the explanatory variables *Subscription Price Discount*, *Relative Share Issued* and *Implied Share Price Depreciation* in Appendix C.

10.2.2 Heteroskedasticity

Heteroskedasticity occurs when the variance of a variable is not constant across its range. If this is present, standard errors are biased, and the t statistic does not follow a t-distribution, meaning one might fail to reject the null hypothesis or reject it too often. To remove biased standard errors, we calculate the robust standard errors, also called heteroskedasticity-consistent (HC) standard errors and use these when estimating our confidence levels for the regression models used.

10.2.3 Multicollinearity

Multicollinearity occurs when two or more explanatory variables in a regression model are perfectly correlated with each other, which can cause issues with the reliability and interpretability of the model. To check for multicollinearity, we compute a correlation matrix, represented in Table 9 below:

Table 9- Correlation Matrix

	'Subscription Price Discount'	'Relative Shares Issued'	'Implied Share Price Depreciation'	'(ln) Market Capitalization'	'(ln) Proceeds'	ROE	'Dummy Repair'	'Dummy Stock Exchange'
'Subscription Price Discount'	1	-0.25	0.92	-0.17	-0.03	-0.17	0.21	0.03
'Relative Shares Issued'	-0.25	1	-0.19	0.36	-0.22	0.21	-0.15	-0.23
'Implied Share Price Depreciation'	0.92	-0.19	1	-0.22	-0.11	-0.19	0.15	0.03
'(ln) Market Capitalization'	-0.17	0.36	-0.22	1	0.76	0.38	-0.12	-0.16
'(ln) Proceeds'	-0.03	-0.22	-0.11	0.76	1	0.22	-0.05	0.004
ROE	-0.17	0.21	-0.19	0.38	0.22	1	-0.13	-0.16
'Dummy Repair'	0.21	-0.15	0.15	-0.12	-0.05	-0.13	1	0.29
'Dummy Stock Exchange'	0.03	-0.23	0.03	-0.16	0.004	-0.16	0.29	1

The correlation between subscription discount and the implied share price depreciation is high. Since the Implied Share Price Depreciation is a function of Subscription Price Discount and Relative Shares Issued, this comes as no surprise. There is also a high correlation between Proceeds raised and market capitalization. These variables with higher correlation are not used in the same regression model. To further check for multicollinearity, we apply a VIF test on the three regressions. The results are shown in Table 10 below:

Table 10 – VIF Test

Variable	Regression (1)	Regression (2)	Regression (3)
Subscription Price Discount	1,136		
Relative Shares Issued	1,249		
Implied Share Price Depreciation		1,065	3,286
Implied Share Price Depreciation:Dummy Stock Exchange			4,108
Dummy Stock Exchange	1,148	1,121	1,801
Dummy Repair	1,142	1,130	1,145
ROE	1,179	1,214	1,216
(ln) Proceeds	1,129		
(ln) Market Capitalization		1,194	1,194

The VIF tests show no significant results (VIF-score above 5). Therefore, we conclude that multicollinearity does not exist in the chosen regression models.

10.2.4 Data and Sample Size

The concern of data limitations remains for the cross-sectional regression analysis. The sample size of 336 events may not be sufficient to accurately represent the relationship between CAR and the explanatory variables. This limitation becomes evident when looking at smaller subsamples. The data might not be large enough to make conclusions from certain subsamples of interest. This is because a small sample size can lead to biases and increase the risk of type I and type II errors. This can limit the generalizability of the findings and reduce the statistical power of the analysis. However, we are confident in the work done to include the most comprehensive collection of private placements on the main lists in our selected markets.

11. Conclusion and Further Research

The motivation behind this thesis has been to assess the use of private placements in Norway and Sweden and investigate the short-term market reaction to firms issuing equity privately on OSE and OMX. We find that private placements are not a Norwegian phenomenon, as it accounts for 58% of all additional capital raised on Nasdaq Stockholm from 2017 to 2022. We argue that the widespread use of private placements in Norway and Sweden can be partially explained by the lower regulatory requirements than for rights issues or public issues, making the former a more cost-effective and easier way of raising capital.

With a sample of 188 transactions on OSE and 148 transactions on OMX, totaling 366 private placements, we have conducted an analysis by using event study methodology and cross-sectional regressions. In a $[-1,1]$ window, we find that firms on OSE and OMX experience a CAAR of -5.4% and -0.5% after a private placement announcement. The CAAR of Norwegian listed firms is significantly different from zero at the 5% level, while that of Swedish firms was insignificant. The negative significant CAAR is different from other research reporting positive announcement returns. Our results are consistent with both the signaling hypothesis by Ross (1977) and the pecking order theory by Myers and Majluf (1984), stating that managers signal a firm's true value through its financing decisions. Moreover, our results confirm and support our economic intuition. With an average implied share price depreciation of 6.2% and 4.6% on OSE and OMX, the announcement returns should be negative, unless there are strong positive informational effects countering the dilutional effect. Further, our empirical research is mainly divided into two parts.

The first part investigates whether the announcement returns on OSE and OMX align with the mechanically implied share price depreciation. We find that for every 1% increase in the implied share price depreciation, issuers on OSE and OMX experience a reduction in announcement returns of 0.62%, on average. The Norwegian and Swedish markets react less than expected, meaning that the private placements signal positive information, countering the mechanical share price reduction that stems from the dilution and offer discount. This finding implies that issuing firms experience lower indirect flotation costs, making private placements even more cost-effective compared to rights issues. This is also beneficial for nonparticipating shareholders since the economic dilutional effect decreases. Together with all other benefits,

this finding could serve as a partial explanation for the widespread use of private placements in Norway and Sweden.

In the second part, we examine whether the informational effects from private placements differ in the two markets. We find that the informational effect from private placements is more positive in Sweden compared to Norway, showing that nonparticipating shareholders in Sweden experience a less adverse effect on their shareholder returns compared to Norway. We propose the following explanation for this result. A larger share of active and strategic investors participating in the private placements on OMX may reduce agency costs and improve firm value by helping the firm with decision-making and valuable insight.

Other variables are insignificant or only weakly significant in our study. The coefficient for the *Dummy Repair* variable is statistically insignificant in all three regressions. We would expect firms planning to compensate existing shareholders with a repair issue to receive a more positive market reaction than firms that do not. Though, the lack of significance might be explained by the fact that the repair effect is small relative to the private placement and that many repair offerings are cancelled. We do not find any statistically significant results for the seven industries included in the regression. This implies that the firms within these industries do not, on average, experience a different CAR than the baseline industry. When investigating whether the purpose of the private placement influences announcement returns, we only find statistically significant results for the Investment category. The Investments category has a coefficient of -0.023, meaning that these firms experience 0.023% more negative post-announcement returns, on average, compared to firms stating General Corporate Purposes.

Regarding further research, it would be interesting to investigate the long-term performance of firms issuing equity privately. Another valuable and interesting research topic is the relationship between types of participating investors and announcement returns. Here, one could also study the participating investors' trading patterns. Then, one could find what effect the different types of investors have on announcement returns. We argue that both active and strategic investors may have a positive effect on announcement returns, as they might increase monitoring of management, ensure efficient allocation of the firm's resources and validate the firm as a good investment.

References

- Aksjeloven. (1997). *Lov om aksjeselskaper*. (LOV-1997-06-13-44). Lovdata.
<https://lovdata.no/dokument/NL/lov/1997-06-13-44>
- Aktiebolagslag. (2005). *Aktiebolagslag (2005:551)*. (2005-06-16). Sveriges Riksdag.
https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/aktiebolagslag-2005551_sfs-2005-551#K11
- Aktiemarknadens Självregleringskommitté. (2014, November 21). *RIKTADE EMISSIONER*.
https://regelkommitten.se/riktade-kontantemissioner/g%C3%A4llande-regler__25
- Barber, B. M., Lyon, J. D. & Tsai, C.-L. (1999). Improved Methods for Tests of Long-Run Abnormal Stock Returns. *The Journal of Finance*, 54(1), 165-201.
- Barclay, M. J., Holderness, C. G., & Sheehan, D. P. (2007). Private placements and managerial entrenchment. *Journal of Corporate Finance*, 13, 461-482.
- Berk, J., & DeMarzo, P. M. (2019). *Corporate finance* (Fifth edition; Global edition). Pearson.
- Eckbo, B. E. (2007). Security Offerings. In B. E. Eckbo (Ed.), *Handbook of Empirical Corporate Finance* (First edition. ed., Vol. Volume 1, pp. 235-282). Elsevier.
- Eckbo, B. E. & Norli, Ø. (2004). *The Choice of Seasoned-Equity Selling Mechanism: Theory and Evidence*. (CEPR Discussion paper No. 4833). <https://openaccess.nhh.no/nhh-xmlui/handle/11250/163713>
- Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25, 383-417.
- Galai, D. & Masulis, R. W. (1976). The Option Pricing Model and the Risk Factor of Stock. *The Journal of Financial Economics*, 3, 53-81.
- Gao, X. & Ritter, J. R. (2010). The marketing of seasoned equity offerings. Forthcoming, *The Journal of Financial Economics*.
- Hertzel, M., & Smith, R. L. (1993). Market Discounts and Shareholder Gains for Placing Equity Privately. *The Journal of Finance*, 48, 459-485.
<https://www.jstor.org/stable/2328908>

- Holderness, C. G. (2018). Equity issuances and agency costs: The telling story of shareholder approval around the world. *Journal of Financial Economics*, 129, 415-439. <https://www.sciencedirect.com/science/article/pii/S0304405X18301545>
- Holderness, C. G. P., Jeffrey. (2016). Shareholder nonparticipation in valuable rights offerings: New findings for an old puzzle. *Journal of Financial Economics*, 120, 252-268.
- Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: Managerial Behavior, Agency Costs and Ownership Structure. *The Journal of Financial Economics*, 3(4), 305-360.
- Jensen, M. C., (1986). Agency Costs of Free Cash Flow, Corporate Finance and Takeovers. *The American Economic Review*, 76(2), 323-329.
- MacKinlay, C. A. (1997). Event Studies in Economics and Finance. *The Journal of Economics Literature*, 35, 13-29.
- Majluf, N. S. & Myers, S. C. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *The Journal of Financial Economics*, 13, 187-221.
- Modigliani, F. & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261-297.
- Oslo Børs. (2014, September 3). *The equal treatment rule in securities legislation* (Circular No. 2/2014). Euronext. <https://www.euronext.com/en/media/6602/download>
- Prabhala, N. R. (1997). Conditional Methods in Event Studies and an Equilibrium Justification for Standard Event-Study Procedures. *The Review of Financial Studies*, 10(1), 1-38. <https://www.jstor.org/stable/2962255>
- Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signalling Approach. *The Bell Journal of Economics*, 8(1), 23-40. <https://www.jstor.org/stable/3003485>
- Statistiska Centralbyrån. (2023) *Shareholder structure in companies quoted on Swedish marketplace*. (2023). <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/financial-markets/shareholding-statistics/shareholders-statistics/pong/tables-and-graphs/shareholder-structure-in-companies-quoted-on-swedish-marketplace/>
- Waage-Fossan, P. (2020, March 2020). Står kriseemisjoner for døren? *Finansbloggen*. <https://blogg.pwc.no/finansbloggen/taar-kriseemisjoner-for-doren/>

- Winther, P. (2022, December 20). *Finanstilsynet med pekefinger til meglerhusene: Advarer om uheldig bruk av rettede emisjoner*. Dagens Næringsliv.
<https://www.dn.no/bors/finanstilsynet/oslo-bors/emisjon/finanstilsynet-med-pekefinger-til-meglerhusene-advarer-om-uheldig-bruk-av-rettede-emisjoner/2-1-1377512>
- White, H. (1980). A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. *Econometrica*, 48(4), 817-838.
<https://www.jstor.org/stable/1912934>
- Wruck, K. H. (1989). Equity ownership concentration and firm value. Evidence from Private Equity Financings. *The Journal of Financial Economics*, 23, 3-28.
- Wu, Y.L. (2004). The Choice of Equity-Selling Mechanisms. *The Journal of Financial Economics*, 74, 93-119.

Appendix A

Ordinary Least Squares Assumptions

1. Linear in parameters

The first assumption is that the regression must be linear in parameters. This means that the dependent variable is related to the independent variable linearly (Wooldridge, 2012).

2. Random sampling

The data is drawn from a random sample of the population, containing n observations (Wooldridge, 2012).

3. No perfect multicollinearity

The sample has no constant independent variables, and therefore no exact linear relationship between variables. The explanatory variables cannot be perfectly correlated.

4. Zero conditional mean

The error term has an expected value of zero given any value of the explanatory variables:
 $E(u|x) = 0$ (Wooldridge, 2012).

5. Homoscedasticity

The variance of the error term should be homoscedastic and have the same variance given any value of the explanatory variable. If this does not hold and $\text{Var}(u|x)$ does depend on x , the error term exhibits heteroskedasticity (Wooldridge, 2012).

Appendix B

Example of the Implied Share Price Depreciation Variable

In this example, we illustrate how issuing equity with a discount and the implied share price depreciation variable affect firm value. We assume a perfect capital market and that the issuing firm's net debt is equal to zero, hence the market value of the firm's assets corresponds to the market value of its equity.

This firm has 1500 shares outstanding ($N = 1500$) and a price per share of 100 ($P = 100$). The market value of this firm's equity is:

I. Market value of equity = $N \times P = 1500 \times 100 = 150\,000$

The same firm executes a private placement with cash settlement and issues 15 % of the shares outstanding with a discount of 30% to the prevailing share price. The proceeds raised from the offering are therefore equal to:

II. Proceeds from the offering = $(1500 \times 15\%) \times (100 \times (1-30\%)) = 15\,750$

The proceeds raised increase the firm's cash balance, hence the market value of the firm's assets and equity is now equal to:

III. Market value of equity after offering = $150\,000 + 15\,750 = 165\,750$

The number of shares outstanding after the offering is equal to:

IV. Number of shares after the offering = $1500 + (1500 \times 15\%) = 1725$

We can then find the new share price (P) with the following formula:

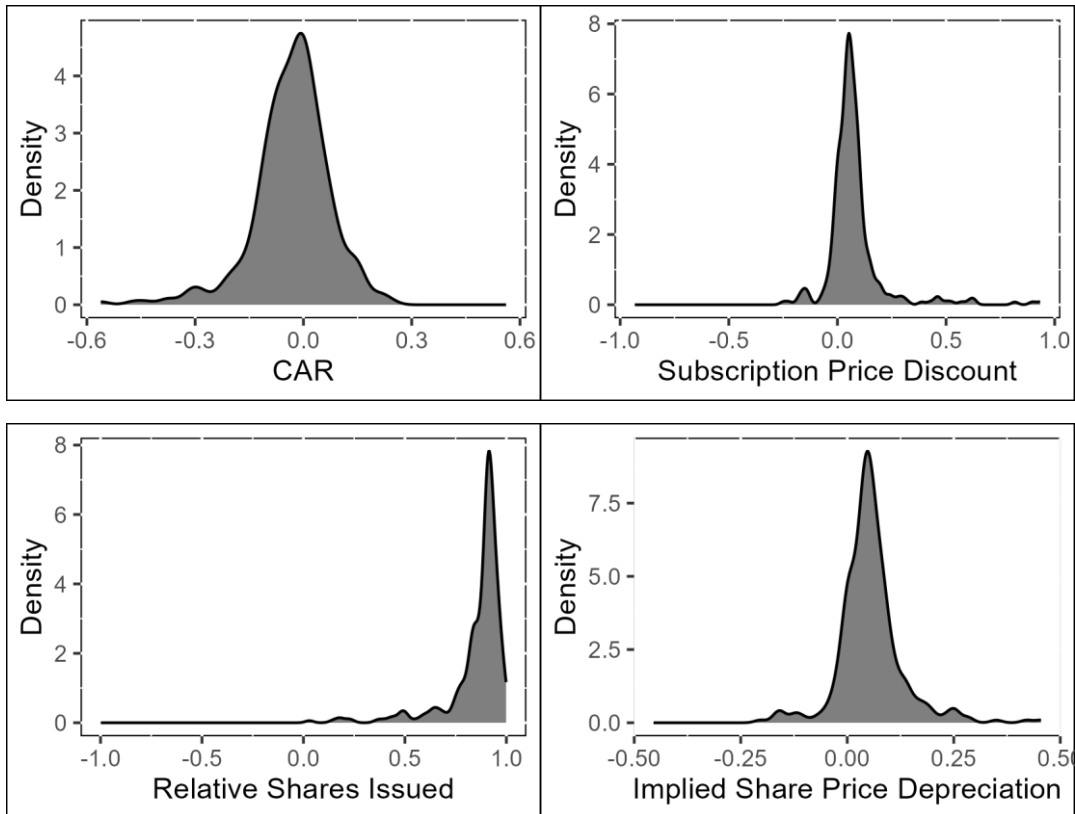
V. $P = \text{Market value of equity} / N \rightarrow 165\,750 / 1725 = 96.087$

Lastly, we illustrate how the private placement with a 30 % discount has effectively reduced the share price. The reduction in percent corresponds to the implied share price depreciation (D):

VI. $D = (100 - 96.087) / 100 = 3.913\% \quad \Leftrightarrow \quad D = 30\% \times (225 / 225 + 1500) = 3.913\%$

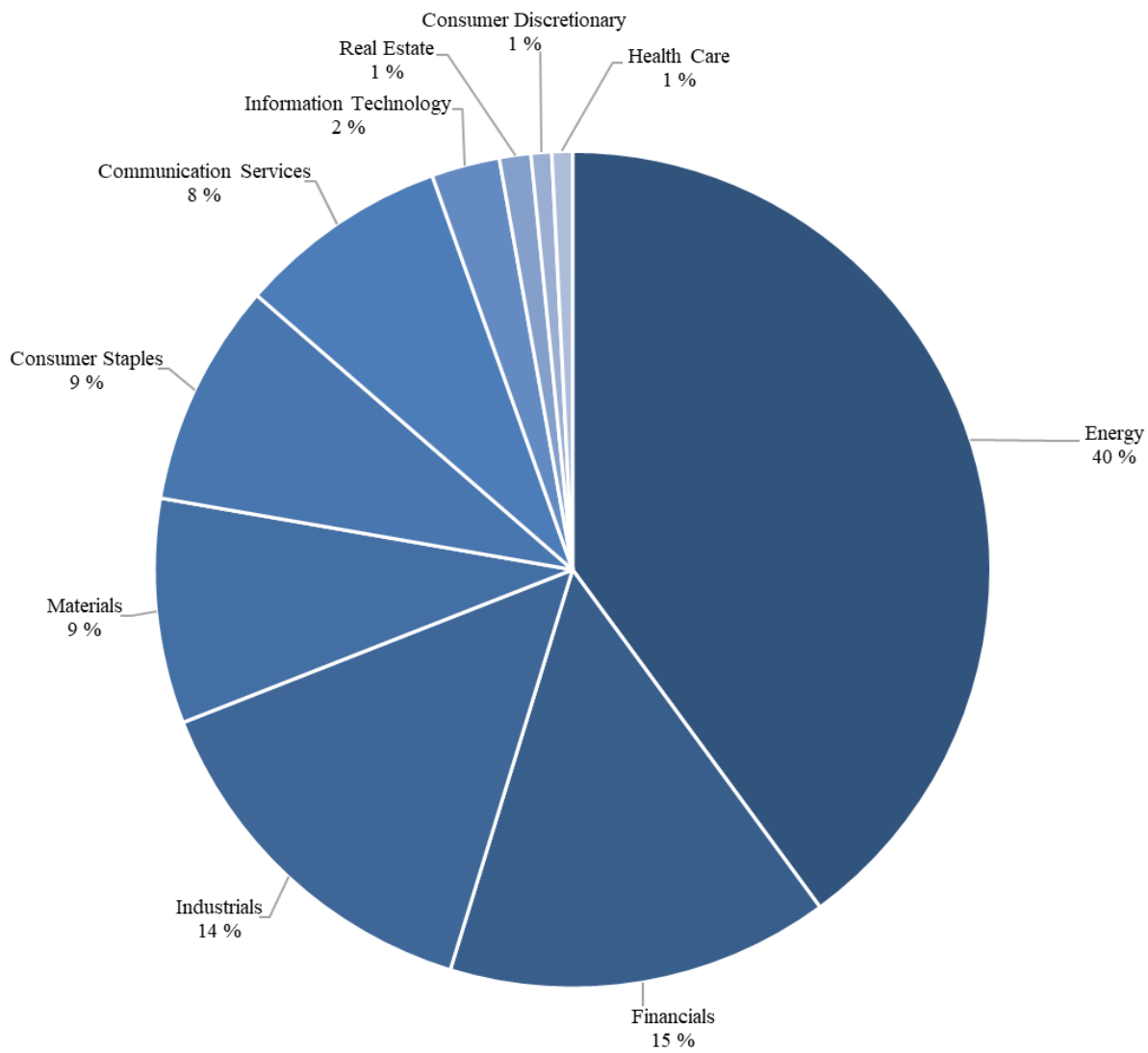
Appendix C

Assessment of Outliers



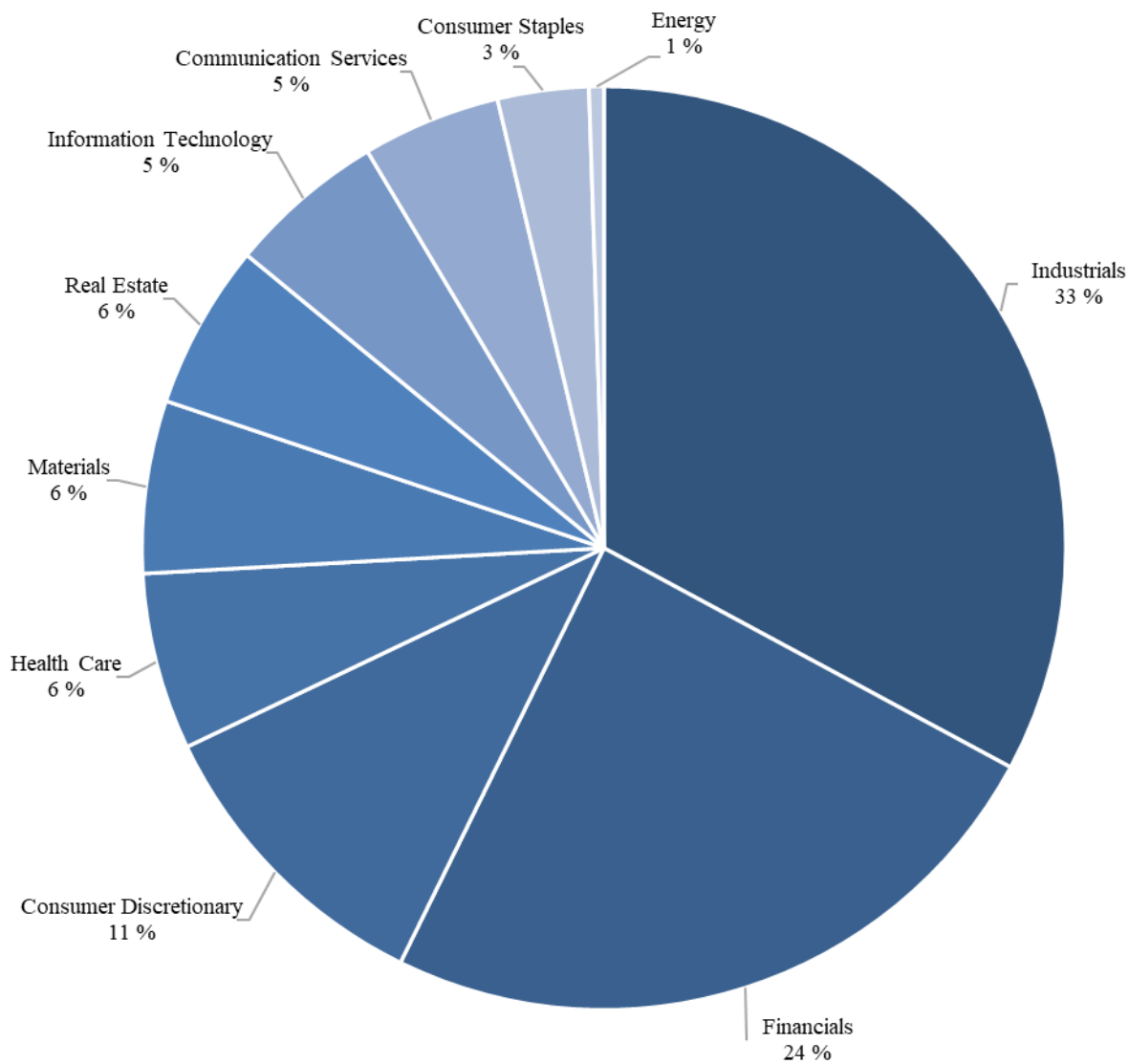
Appendix D

OSE Market Composition



Appendix E

OMX Market Composition



Appendix F

Wilcoxon Signed-Rank Test

Day	-5	-4	-3	-2	-1	0	1	2	3	4	5
p-value OSE	0.52	0.88	0.24	0.66	0.31	0.00***	0.00***	0.00***	0.12	0.63	0.08*
p-value OMX	0.58	0.75	0.23	0.15	0.92	0.02**	0.20	0.49	0.45	0.81	0.00***

Note: * $p < 0.1$, ** $p < 0.05$ and *** $p < 0.01$ indicate the statistical significance levels